

SPEED TABLE

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

SOUTHERN PACIFIC COMPANY



WESTERN DIVISION SPECIAL INSTRUCTIONS

No. 11

EFFECTIVE SUNDAY, SEPTEMBER 30, 1962

AT 12:01 A.M.,

PACIFIC STANDARD TIME

SUPERSEDING SPECIAL INSTRUCTIONS

No. 10

**THESE INSTRUCTIONS CONSTITUTE A PART
OF THE TIMETABLE CURRENTLY IN EFFECT**

W. M. JAEKLE,

General Manager.

J. A. McKINNON,

M. A. McINTYRE,

Assistant General Managers.

J. M. HATCHER,

General Superintendent of
Transportation.

J. P. GRIFFIN,

Superintendent of Transportation.

A. S. McCANN,

Superintendent.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

HOSPITAL DEPARTMENT SURGEONS

LOCATION	NAME	TITLE	LOCATION	NAME	TITLE
San Francisco	Dr. V. M. Strange	Chief Surgeon	Sacramento	Dr. K. Kossner	Aurist
So. San Francisco	Dr. D. E. Julian	District Physician & Surgeon	Sacramento	Dr. E. V. Mianian	Oculist
Oakland	Dr. Ray A. Ericson	Aurist	Roseville	Dr. L. B. Jones	District Physician & Surgeon
Oakland	Dr. F. B. Parker	District Physician & Surgeon	Roseville	Dr. J. F. McAnally	Asst. Dist. Physician & Surgeon
Oakland	Dr. H. H. Appeldorn, Sr.	Division Surgeon	Tracy	Dr. J. E. Longley	District Physician & Surgeon
Oakland	Dr. H. H. Appeldorn, Jr.	District Physician & Surgeon	Tracy	Dr. John C. Kimball	Asst. Dist. Physician & Surgeon
Oakland	Dr. H. W. Wolfson	District Physician & Surgeon	Tracy	Dr. H. L. McClelland	Asst. Dist. Physician & Surgeon
Oakland	Dr. D. E. Dietrich	District Physician & Surgeon	Stockton	Dr. H. T. Quinn	District Physician & Surgeon
Oakland	Dr. F. E. Rapp	District Physician & Surgeon	Stockton	Dr. D. H. Powell	Oculist & Aurist
Oakland	Dr. Weldon Thyberg	District Physician & Surgeon	Stockton	Dr. J. R. Powell	Asst. Oculist
Oakland	Dr. Edmund H. Padden	Oculist	Lodi	Dr. L. J. Peterson	District Physician & Surgeon
Oakland	Dr. Jay R. Sharpsteen	Oculist	Lodi	Dr. Russell O. Spittler	District Physician & Surgeon
Fruitvale	Dr. G. W. Dygert	Asst. Dist. Physician & Surgeon	Lockeford	Dr. N. P. Barbour	Emergency Surgeon
Fruitvale	Dr. W. R. Wiesinger	Aurist	Ione	Dr. L. B. Gallager	Emergency Surgeon
Fruitvale	Dr. H. P. Howell	Asst. Oculist & Aurist	Galt	Dr. V. E. Greer, Jr.	Emergency Surgeon
Elmhurst	Dr. Theo. R. Stepman	District Physician & Surgeon	Oakdale	Dr. E. E. Chouret	District Physician & Surgeon
Berkeley	Dr. J. R. Masterson	District Physician & Surgeon	Oakdale	Dr. Raymond V. Mundall	Asst. Dist. Physician & Surgeon
Berkeley	Dr. W. G. Donald	District Physician & Surgeon	Manteca	Dr. Benj. Taylor	Emergency Surgeon
Berkeley	Dr. H. G. Mankin	District Physician & Surgeon	Ripon	Dr. Gilbert Den Dulk	Emergency Surgeon
Albany	Dr. Douglas Ream	District Physician & Surgeon	Modesto	Dr. R. R. Wilson	District Physician & Surgeon
Richmond	Dr. Lawrence Brown	District Physician & Surgeon	Modesto	Dr. E. K. Fawcett	District Physician & Surgeon
Richmond	Dr. W. E. Cunningham	District Physician & Surgeon	Modesto	Dr. J. K. Morris	Oculist & Aurist
Richmond	Dr. Douglas D. Volland	Asst. Dist. Physician & Surgeon	Turlock	Dr. M. C. Collins	District Physician & Surgeon
Alameda	Dr. A. L. Cuerra	District Physician & Surgeon	Livingston	Dr. J. J. Wolohan	Emergency Surgeon
Alameda	Dr. W. C. Babcock	District Physician & Surgeon	Atwater	Dr. Arthur P. Harris	District Physician & Surgeon
San Leandro	Drs. Rudnick & Kessler	District Physicians & Surgeons	Merced	Dr. Wm. E. Fountain	District Physician & Surgeon
San Leandro	Dr. Theo. R. Stepman	District Physician & Surgeon	Merced	Dr. Shelby M. Hicks	Asst. Dist. Physician & Surgeon
San Leandro	Dr. H. A. Ducey	District Physician & Surgeon	Merced	Dr. K. W. Patterson	Asst. Dist. Physician & Surgeon
San Leandro	Dr. Edwin Wortham	Oculist	Chowchilla	Dr. Herbert O. Leff	Emergency Surgeon
San Lorenzo	Dr. Ramond C. Gallagher	District Physician & Surgeon	Chowchilla	Dr. A. B. Bigler	Emergency Surgeon
Hayward	Dr. Keith West	District Physician & Surgeon	Madera	Dr. Leonard Katz	District Physician & Surgeon
Hayward	Dr. Roy DeLaney, Jr.	District Physician & Surgeon	Fresno	Dr. F. E. Cooley	District Physician & Surgeon
Rodeo	Dr. K. E. Stemmler	District Physician & Surgeon	Fresno	Dr. Richard H. Smiley	Asst. Dist. Physician & Surgeon
Crockett	Dr. Samuel Eldridge	District Physician & Surgeon	Fresno	Dr. H. E. Chandler	Asst. Dist. Physician & Surgeon
Vallejo	Dr. Burton F. Jones	District Physician & Surgeon	Fresno	Dr. Richard L. Jones	Asst. Dist. Physician & Surgeon
Vallejo	Dr. G. J. Budd	District Physician & Surgeon	Fresno	Dr. Fred E. Knight	Oculist & Aurist
Vallejo	Dr. J. C. Miller	Asst. Dist. Physician & Surgeon	Patterson	Dr. E. Everett Leforge	District Physician & Surgeon
Napa	Dr. D. H. Murray	District Physician & Surgeon	Crows Landing	Dr. E. Everett Leforge	District Physician & Surgeon
St. Helena	Dr. M. M. Booth	Emergency Surgeon	Newman	Dr. A. M. Roscoe	Asst. Dist. Physician & Surgeon
Calistoga	Dr. Frank McGreane	District Physician & Surgeon	Newman	Dr. James E. Thompson	District Physician & Surgeon
Benicia	Dr. B. T. Sanford	District Physician & Surgeon	Gustine	Dr. Ben R. Leonard	Emergency Surgeon
Martinez	Dr. B. M. Whisenand	District Physician & Surgeon	Los Banos	Dr. L. R. Hillier	District Physician & Surgeon
Martinez	Dr. W. A. Fitzpatrick	District Physician & Surgeon	Dos Palos	Dr. P. F. Smith	District Physician & Surgeon
Concord	Dr. L. Robert Martin	District Physician & Surgeon	Firebaugh	Dr. C. A. Buttram	Emergency Surgeon
Walnut Creek	Dr. M. C. Bolender	Emergency Surgeon	Kerman	Dr. Alvin Chaffin	District Physician & Surgeon
Danville	Dr. John Blemer	Emergency Surgeon	Riverdale	Dr. R. A. Hunt	Emergency Surgeon
Pittsburg	Dr. Claud L. Kerns	Emergency Surgeon	Niles	Dr. E. C. Grau	District Physician & Surgeon
Antioch	Dr. Donald A. Gish	Emergency Surgeon	Pleasanton	Dr. Harold J. Shanks	District Physician & Surgeon
Suisun-Fairfield	Dr. Felix R. Rossi, Jr.	District Physician & Surgeon	Livermore	Dr. F. Leslie Herrick	District Physician & Surgeon
Suisun-Fairfield	Dr. W. J. Olson	Asst. Dist. Physician & Surgeon	Irvington	Dr. H. F. McMahon	District Physician & Surgeon
Suisun-Fairfield	Dr. Wm. R. Nesbitt	Asst. Dist. Physician & Surgeon	Santa Clara	Dr. H. G. Cleary	District Physician & Surgeon
Vacaville	Dr. M. P. Stansbury	District Physician & Surgeon	San Jose	Dr. D. R. Threfall	District Physician & Surgeon
Winters	Dr. E. A. Young	District Physician & Surgeon	San Jose	Dr. John Watson	District Physician & Surgeon
Dixon	Dr. Alvin H. Gullock	Emergency Surgeon	San Jose	Dr. V. S. Matthews	District Physician & Surgeon
Davis	Dr. Leo A. Cronan	Emergency Surgeon	San Jose	Dr. H. G. Cleary	District Physician & Surgeon
Davis	Dr. Charles L. McKinney	Emergency Surgeon	San Jose	Dr. J. M. Hohl	Asst. Dist. Physician & Surgeon
Davis	Dr. T. Y. Cooper	Emergency Surgeon	San Jose	Dr. P. T. Pace	Aurist
Sacramento	Dr. W. W. Cress	Division Surgeon	San Jose	Dr. Albert Buckwald	Aurist
Sacramento	Dr. A. F. Wallace	Division Surgeon	San Jose	Dr. Stanley T. Robinson	Oculist
Sacramento	Dr. B. A. Daley	District Physician & Surgeon	San Jose	Dr. Peter Parisi	Oculist
Sacramento	Dr. W. N. Becker	District Physician & Surgeon	San Jose	Dr. Jay Overmeyer	Oculist
Sacramento	Dr. E. K. Perkins	District Physician & Surgeon	San Jose	Dr. Norman Buys	Oculist
Sacramento	Dr. J. W. Harris	District Physician & 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
EMERGENCY HOSPITAL	SACRAMENTO
EMERGENCY HOSPITAL	WEST OAKLAND
EMERGENCY HOSPITAL	FRESNO

WATCH INSPECTORS

K. I. Dunlap, Mgr. of Time Service	65 Market St., San Francisco
San Francisco	A. Solari, 745 Third St.
Oakland	Evan J. Sawyer, 1624 Franklin St.
Oakland	Don J. Allphin, 5836 Foothill Blvd.
Oakland	Leslie's Jewelry, 7525 MacArthur Blvd.
Alameda	D. A. Holker, 1251 Park St.
Berkeley	C. H. Lee Jeweler, 2210 Shattuck Ave.
Richmond	Stribley Jewelers, 1013 McDonald Ave.
San Lorenzo	Kurt J. Prosch, 545 Paseo Grande
Stockton	W. K. Banks & Son, 111 No. San Joaquin St.
Lodi	Donnell Guptaill, 22 S. School St.
Benicia	Curt S. Appe
Vallejo	Frank Lovegod, 617 Marin St.
Fairfield	C. L. Pegar
Crockett	A. Ghioldi
Calistoga	W. A. Stone

Sacramento	Tom B. Monk, 1006 "J" Street
Roseville	Verno Martin, 245 Vernon St.
Martinez	O. J. Danielson, Beard's Jewelers
Pittsburg	Woulf & Ury
Antioch	Clarks Jewelers
Tracy	L. H. Jolley
Livermore	E. Harold Witt
Niles	Hoyle Easley, 513 First St.
San Jose	Frank Scholes, 33 N. First Street
Newman	Beall & Brown, Jewelers
Los Banos	Machado's 636 I St.
Fresno	Tooms and Lewis Jewelers, 2044 Fresno St.
Fresno	Geo. E. Crain, 442-B East Shields St.
Madera	T. H. Elliott, 348 E. Yosemite Ave.
Modesto	Shoemaker's, 1323 Jay St.
Turlock	D. F. Hall

RULE A. Employes must have copy of Rules and Regulations of the Transportation Department effective July 1, 1960, with page revisions as listed on page 1 revised April 1, 1961.

RULE M. Employes are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

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

RULE 10. COLOR SIGNALS

COLOR	INDICATION
(a) Red	Stop.
(b) Yellow	Proceed at reduced speed, and for other uses prescribed by the rules.
(c) Green	Proceed, and for other uses prescribed by the rules.
(d) Blue	See Rules 26 and 297.

RULE 10-H. On the following branches:

Biola	Schellville	Riverdale	Ione
Calistoga	Vallejo	Oakdale	
Winters	San Ramon	Kentucky House	
Union	Stonehurst	Woodbridge	

a green signal will not be displayed to the right of each track at the limit of restrictions. Instead, limit of restriction will be indicated by a yellow signal displayed to the left of track in direction of approach. Speed may be resumed when engine reaches the yellow signal so displayed, or when it is known by engineer that rear of train has passed the limit of restriction as specified in train order or timetable bulletin.

RULES 10-G, 10-H and 10-I. When unattended red flags or red lights, yellow signals, red **CONDITIONAL STOP** signs and yellow **PROCEED PREPARED TO STOP** signs are displayed between siding switches, they must be duplicated to the right of the siding in direction of approach. If clearance between siding and main track does not permit display of these signals to the right of the siding in direction of approach, signals may be displayed to the left of the siding. Display of these signals to the left of a siding in direction of approach must be respected as though they were displayed in accordance with these rules.

RULE 10-J. Speed signs prescribing an increase in speed will not be installed on branches. Speed Restrictions tables will indicate permissible speeds between mile post locations named.

RULE 26. When employes are working between, upon, in or under an engine or units, train, car or cars for purposes of inspection, repair or service of any of them a blue sign reading "Men at Work" (white lettering on blue background) must be displayed at each end of track or equipment to which coupling can be made. If engine is attached to train, car or cars, blue sign on engine end must be displayed on engineer's side of cab. On tracks regularly assigned for repairing of cars a blue sign must be displayed on a standee on the track or between rails of the track and switches leading thereto must be locked with a special lock.

At night a blue light must be attached to each blue sign prescribed herein.

When more than one class of employe is engaged in the work, a disk with the name of each employe or each class must be attached to the blue sign. A disk may be removed only by the employe attaching it or by an authorized employe. Signs or lights must not be removed by any person other than the employe who placed it, or by an authorized employe, and not until all disks, if any applied, have been removed.

An engine, train, car or cars protected by a blue sign must not be moved nor coupled to, or other equipment placed so as to obstruct the view of the signs or lights.

When repair work is to be done between, upon, in or under an engine or units, train, car or cars and blue signs are not available, engineer must be orally notified by the employe in immediate charge of the work and complete understanding had to prevent movement while work is being performed. The same employe is required to notify the engineer orally when the work has been completed.

On diesel fueling tracks at West Oakland diesel shop and Tracy Diesel track, a blue light will not be attached to reflectorized blue "Men at Work" signs when displayed at night.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except Train 52 is superior to Train 54, Lathrop to Tracy.

RULE 84. Passenger trains making station stop where rear end of train cannot be seen from the head end due to curvature of track, foggy or stormy weather, engineer will recall flagman from the rear as prescribed by Rule 14(d) or 14(e), as the case may be. When all passengers on rear of train have been loaded, flagman will sound signal 16(k) which will be answered by the engineer with signal 14(g). Train will not proceed until signal is given by trainman on head end of train.

RULE 98. Cars must not be kicked, dropped or shoved over railroad crossings not protected by interlocking, unless movement is protected.

RULE 105. Sidings designated "E" in Capacity of Sidings column are assigned for use by eastward trains; those designated "W" are assigned for use by westward trains. Those designated "M" for middle, may be used by trains in either direction. Those designated "N," "S," "1," "2" or "3" are assigned for use by trains as shown in special instructions for the subdivision on which located.

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

When length of train and/or capacity of siding permits, trains taking siding after clearing main track will provide not less than 400 additional feet clearance to fouling points.

RULE 107. Freight trains and engines must avoid passing between stations and loading tracks when passenger trains are closely approaching from opposite direction on double track, and care must be exercised by non-stopping passenger trains when approaching stations at about the same time that other passenger trains are approaching from the opposite direction. When practicable non-stopping trains are to be given preference, but each train must be operated in a manner to avoid confusion and hazard of personal injury.

RULE 206-B. When rubber stamp and printed train order form are used for issuance of Form Y train order, train dispatcher after recording form in train order book with stamp is required to write and transmit only the order number, addresses, mile post locations, stations, times and dates. Train order operators using the printed form for such train orders are required to copy and repeat only that portion of the order transmitted by the train dispatcher.

RULE 283. Movements governed by semaphore type diverging route signals displaying "Proceed on Diverging Route", Figs. A and B, must be made with caution.

RULES 281 and 285. Movements against the current of traffic governed by semaphore type dwarf signals displaying "Proceed", Fig. E, Rule 281; or by light type dwarf signals displaying "Proceed not Exceeding Medium Speed.", Fig. G, Rule 285, must be made with caution and position of switches observed.

RULE 505. AUTOMATIC BLOCK SIGNAL 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.

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 block indicator indicates block clear on opposite track. Within CTC limits train dispatcher's permission must also be obtained before lock box door is opened.

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, after which lock box door must be closed and locked. Within CTC limits train dispatcher must also be notified by telephone when completed.

When block 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.

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 lock 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.

When pilot light will not illuminate to indicate electric lock is unlocked, push button on adjacent cast iron box, protected with cover and locked with switch lock, should be depressed to illuminate green light. After a time interval of from one to seven minutes pilot light on electric lock will be illuminated, indicating lock is unlocked.

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, train dispatcher must be notified immediately, and movement made only after flag protection provided on both tracks.

MECHANICAL SWITCH LOCKS

After lock box door is opened lock lever may be moved upward against stop. After a time interval of from one to seven minutes indicator will show UNLOCKED and lever may be moved to reverse position "R". Switch may then be operated in usual manner.

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

Emergency lock release to be used only in case of mechanical failure, as indicated by failure of time release to function after several minutes. When necessary to break seal on emergency release, train dispatcher must be notified immediately and movement made only after necessary flag protection is provided.

RULE 605. INTERLOCKING

Trains and engines must not enter main track within interlocking limits where no signal governs such movement until permission has been obtained from signal operator, and must then run with caution not exceeding 12 MPH to the next signal.

Movements governed by dwarf signals must be made with caution and position of switches observed, as such signals govern movements for various routes.

Dual control switches within interlocking limits are under the control of signal operator. When necessary to hand-throw these switches, permission must be obtained from signal operator and be governed by Rules 771 and 772.

At all interlockings, when route lined is not to be used, following engine whistle signal will be sounded: o o — o o.

RULE 663(b). When movements are made over dual control switches under provisions of this rule, dual control switches must be placed in hand position, hand operated in accordance with Rule 772, and locked until movement over the switch has been completed.

CENTRALIZED TRAFFIC CONTROL

RULE 765. Hand operated switches within A-PB or CTC limits must not be operated without permission from train dispatcher and where main track hand operated switches are not equipped with electric or mechanical switch locks and maximum authorized speed is in excess of 20 MPH, trains and engines using such switches must occupy main track continuously or leave main track switch open while work is being performed. Such tracks must not be used by trains or engines for the meeting or passing of trains.

RULE 776. Trains authorized by train dispatcher to pass absolute signal displaying stop indication and to proceed at restricted speed under provisions of this rule, may resume normal speed after rear of train passes next block signal displaying green aspect.

GENERAL REGULATIONS

RULE 808. In case of grade crossing accident, it is permissible for crew members on request of law enforcement officers to furnish their names, occupations and addresses, identification of the train; confirmation that the whistle, bell and headlight or headlights were operating; and direction of the vehicle. Signed statements are not to be given. Should police officers desire any additional information, they should be courteously referred to Claims Department representative.

RULE 836. When necessary to shove cars ahead of engine between stations on descending grade, cars must be chained to the engine unless air brakes are operative on all cars and air cut in.

RULE 872. Enginemen taking charge of engines at West Oakland Diesel Shop and Tracy will consider engines as having been amply supplied with water, fuel, sand, prescribed signals, tools, supplies and flagging equipment in serviceable condition.

RULE 873. Sanders must not be operated between absolute or interlocking signals governing movements over dual control or power operated switches.

RULE 883. When an engine is left without an employe in charge, it must, when practicable, be placed on track affording protection against entry to main track; hand brakes must be fully applied, wheel secured with blocking chain, reverse lever removed from control stand and cab doors locked. If live engine, independent brake also must be placed in full application.

AIR BRAKE RULES

RULE 2-B. FREIGHT TRAINS.

Dynamic brake on head end of freight trains must not exceed four 6-axle units, six 4-axle units or any combination of both which totals 24-axes of dynamic braking except, dynamic brake on DF-1 to DF-13 classes is limited to five units.

Trailing EMD units are capable of dynamic braking when connected to the lead unit with a field loop jumper.

A DF class Alco unit is capable of dynamic braking when its dynamic brake cut-out switch is closed; when the switch is open, the dynamic brake will not operate on the unit.

Field loop jumpers are only required in Alco units to permit the dynamic brake to operate on trailing EMD unit.

RULE 3. Standard brake pipe pressure for Holiday Mail and Express trains, Nos. 377 (PCW), 378 (PCE), 375 (Starpacer), Adv. FMS, FMS, and WCM is 90 pounds.

RULE 11. Cars equipped with brake cylinder release valve may have one or two operating release rods. Operating rods connected to brake cylinder release valve may be identified by stencil reading—"Br. Cyl. Rel." or by a diamond shaped stencil or by noting that ends of release rod form a small closed circle. Air brakes can be released on cars equipped with brake cylinder release valve by a hard momentary pull on release rod after brake pipe pressure has been depleted.

RULE 23. Gondola cars SP-345000 to 345669 are equipped with AB brake system which has automatic change-over feature to provide proper brake function when car is loaded and when empty. Before leaving a station or point where such cars have been added to the consist or where crews are changed, the outgoing engineer must actuate the automatic change-over feature by reducing brake pipe pressure to below 30 pounds whether cars are loaded or empty.

RULE 38-A. Will not apply at Fresno or Sacramento except incoming engineer after completing stop will make a full service brake application, leaving brakes applied. Running test in compliance with Rule 39 must be made as soon as speed permits after train departs terminal.

MISCELLANEOUS

5. Helper service:

- (a) Helper engines must not be placed behind wooden underframe equipment.
- (b) Helper engines consisting of not more than two units may be placed behind caboose.
- (c) Helper engines consisting of not more than four units may be placed immediately ahead of caboose.

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

6. Unless otherwise authorized, trains handling passenger cars with flat spots on wheels in excess of 3¼ inches in length must not exceed 10 MPH. When flat spots are not in excess of 3¼ inches long such cars may be operated at maximum authorized speeds.

27. Should a passenger train be stopped in a tunnel, air conditioned cars within the tunnel must immediately have the air conditioning systems, including ice engines and engine generators, shut off, fresh air intake shutters closed, and blower fans shut off.

Should a train be stopped with the engine in a tunnel and it is found that, in the case of a passenger train it cannot be moved within five minutes after stopping, and in case of a freight train it cannot be moved within a reasonable length of time, trainmen and engine men must take necessary precautions to prevent movement. Independent brake and sufficient hand brakes must be immediately applied. Engine wheels must be secured by blocks and chains, and power plants and steam generators, if any, on engine shut down.

28. DF and DP class engines operated with engineer in other than the lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossings at grade, subject to further restriction imposed by local conditions.

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains:

NOMINAL CLASS	RUNNING FORWARD WITH TRAIN OR LIGHT	RUNNING BACKWARD WITH TRAIN OR LIGHT
DF-1 to 12 with 60/17 gear ratio trucks...	79	#30
DF-1 to 12 with 62/15 gear ratio trucks...	70	#30
DF-100, 127.....	65	#65
DF-114, 117 with 62/15 gear ratio trucks...	65	#65
DF-114, 117 with 65/12 gear ratio trucks...	55	#55
DF-116, 118, 120, 121, 122, 124, 125.....	70	#70
DF-101, 103 to 107, 109 to 112.....	35***	#35***
DF-200 to 206.....	55	#55
DF-300 to 306.....	65	#65
DF-307.....	60	#60
DF-500, 501.....	70	#70
DF-602 with gear ratio 61/16.....	70	70
DF-602 with gear ration 60/17.....	79	79
DF-603, 606.....	79	#79
DF-605, 607, 608, 610 to 616.....	70	#70
DF-617, 618, 619, 620.....	75	#75
DF-800.....	70	#30
DP-4 to 13.....	79	#30
DS-1, 4, 5.....	45	45
DS-2, 3, 6 to 12.....	60	60
DS-100 to 108, 110, 111, 113 to 115, 117 to 122	60	#60
DS-109.....	65	65
DS-200 to 205.....	35	35
RDC.....	79	#30
Any Steam or Diesel Engine Not Listed....	35	25

#When on head end of train or running light and engineer is in other than leading control cab in direction of movement.

##When operated in multiple unit control with engineer in other than lead unit in direction of movement must not exceed 30 MPH.

***On all main tracks and Suisun-Schellville, Napa Junction-Vallejo, Napa Junction-Napa, Lodi-Woodbridge, Lodi-Valley Spring, Galt-Clay.

All other Branch tracks 25 MPH.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

- When all weight has been removed from any one pair of drivers..... 20 MPH
- When all weight has been removed from only one wheel of 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

Dead diesel engines hauled in train and weighing 150,000 pounds or more must be placed one car behind engine handling the train. If weight is less than 150,000 pounds dead diesel engines must be placed near rear of train.

Dead steam engines hauled in train and weighing 150,000 pounds or more on drivers must, as far as practicable, be cut in between 25 and 30 cars from the head end of the train but in no event less than 8 cars from engine handling the train. If weight is less than 150,000 pounds on drivers dead steam engines must be placed near rear of train.

Unless otherwise restricted, not more than two dead steam engines shall be moved in any one train and when so moved they must be separated by five cars. When an S or SE class and a road engine are moved dead in train, a steel underframe freight car must be placed between them and S or SE class engine entrained with tender ahead.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

Maximum speed of trains handling dead engines of S or SE class 20 MPH; other steam engines 40 MPH; and diesel engines the speed shown for same engine running forward light, except DS-200, 201 class must have traction motor brushes removed and speed restricted to 30 MPH.

Dead or disabled engines, and equipment listed in timetable which requires movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine is to be moved. Any such engine must not be handled in train until train order designating maximum speed is issued.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Line Clearance Circular have been complied with.

Sacramento Northern engines will not exceed speed restrictions for engines shown on Page 12 of Sacramento Northern Railway Timetable and maximum speed is subject to further restrictions for trains.

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or triple loads.....	..	25
Scale test cars.....	40	30
except SPMW-2024.....	65	49
Cars with arch bar trucks.....	40	30
Steel pile drivers, except:.....	40*	30*
SPMW-4088 (locomotive pile-driver).....	45*	35*
Wooden pile-drivers.....	..	25*
Relief outfits with steam derrick, except:....	45*	25*
Nos. 7000 and 7010 on San Ramon Branch...	..	10
Nos. 7000 and 7010 must not operate between Larkmead and Calistoga on Calistoga Branch.		
Nos. 7000 and 7010 must not operate between Edwin and Ione on Ione Branch unless authorized by Superintendent. If movement authorized, speed of 15 MPH must not be exceeded.		
Nos. 7014 and 7025 must not operate on any branch except Schellville Branch; Calistoga Branch between Napa Jet. and Napa River bridge 69.62 at Napa; and on Vallejo Branch between Napa Jet. and MP 68.40.		
K&J, pedestal or center-hinged air-dump cars (except SPMW 5100 to 5289 loaded or empty).	35*	25*
Locomotive cranes:		
With boom disconnected, heavy end forward, except SPMW-4020, 743 and 2575.)	45	25*
With boom disconnected, light end forward.	35*	25*
With boom in place, either end forward.....	20*	15
With boom in place, either end forward.....	25*	15
Rotary snow plows:		
Steam.....	25	15
Electrified.....	35	15

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced to 5 MPH less than shown in timetable and on speed signs.

OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT AND MIXED TRAINS
Trains of deadhead equipment, with caboose..	65	..
Passenger trains, with caboose.....	65	..
Engine and caboose only, except:.....	..	65
must not exceed speed for same engine running forward light.		
Logs loaded on flat or logging cars, except:....	35	..
On curves.....	25	..
Through truss bridges, tunnels and passing stations.....	15	..
Engine, flanger and caboose only, except:.....	..	40
On curves.....	..	30

SPMW cars equipped with K type brakes must not be handled in trains consisting of more than 50 cars and train must not exceed 40 MPH while handling such equipment.

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers if any, to move on passenger trains.

Passenger carrying cars, baggage, express and other head-end cars, unless equipped with steel center sills and steel platforms must not be handled in passenger trains except on authority of Superintendent.

Freight cars must not be handled behind occupied passenger carrying cars, except in mixed trains in military or naval movements.

Baggage, express, mail, refrigerator or other head-end cars must not be handled on rear of passenger trains unless trainmen can pass through them, except between West Oakland and Pittsburg.

When moving against current of traffic, or when movement is not protected by block signals, speed of passenger trains and light engines must not exceed 59 MPH, and speed of freight trains must not exceed 49 MPH, nor may speed exceed that applying to normal operation. Unless proceed signal received, or it is known that warning devices are operating, such trains and engines must stop approaching road crossings where automatic warning devices are installed, and may proceed after member of crew protects crossing.

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

RULE 5. Time of arrival Tracy for first class trains from Lathrop subdivision will apply at Signal 721. Trains must not pass this point ahead of designated time.

RULE 14(l). Whistle signal must be sounded and bell kept ringing when entering or leaving the Sugar Co.'s yard at Alvarado or approaching their road crossing.

RULE 14(m). Whistle will not be sounded one mile before reaching stations between:
West Oakland and Elmhurst.

RULE 82-A. Trains receiving Western Division clearance at San Jose may leave Santa Clara without clearance.

No. 90 from Western Division may assume corresponding schedule at Santa Clara without clearance.

Third-class trains and sections thereof authorized on Western Division from Redwood Jct. may display indicators and signals, if any, as such schedule or section on Coast Division, San Francisco or Bayshore to Redwood Jct., although movement is authorized under the provisions of Rules D-97-A and D-251.

RULE 83. Identification may be made by eastward trains between Magnolia Tower and Elmhurst to be applied at end of double track. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Identification may be made by eastward trains between Redwood Jct. and Belle Haven to be applied at end of double track. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Train register check of superior trains obtained at West Oakland may be applied at end of double track, Elmhurst, outside of D-251 limits between Sacramento and West Oakland and end of double track Martinez on Tracy line provided superior trains moving in the same direction are not passed in interlocking limits or territory where Rule D-251 is applicable.

Identification of trains may be made by westward trains between Fresno and junction switch. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

RULE 83-A. Trains originating or terminating will register at Los Banos, Ingle and Fresno Yard.

RULE 83-A. At the following stations only trains indicated will register:

West Oakland.....	} Trains originating or terminating
Newark.....	
Niles.....	
Livermore.....	

Extra trains will register at Niles Tower.

Trains originating or terminating San Jose Yard will register at Santa Clara.

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

Niles Tower.....	All trains.
Redwood Jct.....	All trains.
Santa Clara.....	All trains.
Tracy.....	Nos. 57-58

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

West MP	East MP
Oakland (Martinez line).....	17.35
“ (Niles line).....	15.82
“ (Alvarado line).....	14.01
14.02 Mulford.....	18.00
15.83 Hayward.....	21.69
24.00 Alvarado.....	26.00
78.50 Tracy (Martinez-Los Banos line).....	85.64
66.50 “ (Niles-Lathrop line).....	74.37
24.44 Redwood Jct. (San Mateo-Newark line).....	28.20
“ (Palo Alto line).....	27.17
35.20 Newark (Centerville-Redwood Jct. line)....	40.50
28.79 “ (Alvarado-Santa Clara line).....	34.50
40.51 Niles (Tracy-Redwood Jct. line).....	30.67
26.60 “ (Hayward-Milpitas line).....	30.95
41.70 East Pleasanton (San Ramon line).....	45.60
63.25 “ (San Ramon line).....	45.60
45.89 Livermore-Ulmar.....	51.20
54.03 Altamont.....	55.64
38.50 Milpitas.....	42.50
43.47 San Jose (Palo Alto-Coyote line).....	56.00
43.55 “ (Milpitas line).....	56.00
43.74 “ (Alviso line).....	56.00
99.10 Westley.....	101.10
105.85 Patterson.....	108.62
112.00 Crows Landing.....	114.50
117.95 Newman.....	121.04
122.50 Gustine.....	124.60
139.61 Los Banos.....	142.01
152.20 Dos Palos.....	155.00
164.94 Firebaugh-Mendota.....	175.73
181.10 Ingle (Los Banos-Fresno line).....	182.20
181.97 “ (Riverdale Branch).....	End of track
192.46 Kerman.....	194.53
206.04 Fresno (Pratton-Tulare line).....	210.79
199.07 “ (Merced-Clovis line).....	209.60

Second and inferior class trains, extra trains and engines are not required to clear or protect against first-class trains within yard limits where Rule D-251 is applicable.

Oakland: Yardmen must use green flag by day and green light by night when signaling trains to enter or leave yard tracks.

Niles: Unless otherwise instructed, eastward trains operating via Decoto enroute to Livermore line at Niles Junction, must take siding at Niles.

Fresno Yard: When Signal 2046 on Pratton line, or Signal 2042 on eastward track displays stop indication train must stop, and after proceed signal received from yardman (green flag by day, green light by night) may then proceed as prescribed by Rules 509 and 513.

Eastward trains via Pratton line to Fresno Yard must receive proceed signal from yardman (green flag by day, green light by night) before fouling eastward or westward main track.

Eastward trains via Pratton line to Fresno Yard may pass Signal 2068 on Pratton line displaying stop indication without stopping to enter west leg of wye if wye switch is properly set and proceed signal received from yardman will confer authority for movement to fouling point of Tulare line eastward track only.

Trains from Fresno yard to operate via Pratton line may pass Signal 2036 displaying stop indication without stopping at restricted speed to enter west leg of wye if wye switch is properly set and proceed signal received from yardman.

Trains entering or leaving yard tracks must receive proceed signal from yardman (green flag by day, green light by night), except within limits of diverging route signals.

RULE 95. Sections of schedules authorized on Western Division to or from Santa Clara will apply over Coast Division into or out of San Jose.

RULE D-97-A. Will apply as follows: Between West Oakland and Elmhurst; Redwood Jct. and Belle Haven.

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

RULE 103-A. Automatic crossing gates:

Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against the current of traffic or movements from yard tracks over crossings, must know that gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
Magnolia Tower.....	Adeline St.....	5.9
Oakland.....	High St.....	10.4
Oakland.....	50th Ave.....	10.8
Oakland.....	66th Ave.....	11.7
Oakland.....	77th Ave.....	12.2
Oakland.....	77th Ave. (drill).....	12.3
Elmhurst.....	98th Ave.....	13.3

Oakland: When moving against current of traffic flag-man must protect crossing before movement is made over Grove, Broadway, Franklin and Webster Streets, 5th Avenue and 29th Avenue.

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew.

Oakland-

Market St..Pacific Pool Warehouse No. 7,
Mulford.....Crossing Maitland Drive on Airport drill,
L-16.5-C,

Vernalis.....Crossing on Associated Dehydrators spur,
BA-93.0,

Los Banos....Crossing 2nd and 4th Sts., on drill cross-
overs and storage tracks, BA-140.1, BA-
140.2,

Firebaugh....Crossing 12th and 13th Sts., on drill and
spur tracks, BA-166.2, BS-166.4-C,

Cromir.....Crossing Shaw Ave. on team track, BA-
170.2,

Helm.....County road crossing on Holly Sugar Co.
track, BAO-199.1.

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

Ingle.....Riverdale Branch, for siding.

Fresno Yard..End double track, for westward track.

Fresno.....Pratton line, for eastward main track.

RULE 105. Hayward: Siding extends from MP 18.74 to MP 19.77.

Newark: Siding on Tracy-Redwood Jct. line is west of Elmhurst-Santa Clara line crossing extending from MP 37.27 to MP 36.19.

Siding on Elmhurst-Santa Clara line is east of Tracy-Redwood Jct. line crossing extending from MP 31.00 to MP 32.22.

East Pleasanton: Siding is first track north of main track extending from MP 42.91 to MP 44.02.

RULE 221. West Oakland is a train-order office only for trains originating.

Light type train order signal, not equipped with semaphore arms, installed on the west side of the Fruitvale Tower Building.

Mulford, Niles and East Pleasanton are train-order offices only for trains originating when operator is on duty.

Eastward trains to Coast Division, may leave Santa Clara without clearance.

Trains from Western Division must obtain clearance before leaving Redwood Jct.

Fresno Yard is a train-order office only for trains originating.

Fresno is train-order office only between 11:00 P.M. and 8:00 A.M. daily.

RULE D-251. Will apply as follows: Between West Oakland and Elmhurst.

RULE 291-A. Flashing yellow lamp unit on mast of eastward interlocking signal on Coach Yard lead is displayed in both eastward and westward directions. Illumination of this flashing light observed from either direction will authorize an eastward reverse move toward 16th St. or Bays following a westward move into Coach Yard which does not clear the interlocking plant.

RULE 306. Following block signals equipped with a triangular plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
P-SA Elmhurst	Spring switch to Stonehurst Line...	Elmhurst P-SA Niles Line
	Spring switch, end of double track...	Elmhurst P-SA Santa Clara Line
	Spring switch, Shinn.....	P-423
	Spring switch, end double track, Redwood Jct.....	P-285
P-290	Spring switch, Niles.....	
	Spring switch, Milpitas wye, San Jose.....	P-I
P-710	Spring switch, junction to Los Banos Line, Tracy.....	
	Spring switch to yard, Tracy.....	P-829
P-1164	Flood detector at MP 116.60, Timba.....	P-1179
P-1372	Flood detector, MP 137.80 Volta.....	P-1387

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Niles: Signal 291 governs movements, through junction switch, from Tracy line. Signal 293 governs movements, through junction switch, from San Jose line.

Top unit of Signal P-290 governs movements to Tracy line and lower unit governs movements to San Jose line.

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of McArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of Signal 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 735 governs movements on main track. Bottom unit governs movements into yard over crossover.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

PUSH BUTTONS. Tracy:

Push buttons are located on Signal 827 on Los Banos line, and instrument case east of MacArthur Blvd. on Lathrop line to clear signals over junction switch.

Push buttons are located on instrument case opposite Signals 828 and 826, Los Banos line, west of spring switch to yard.

RULE 516. Overlap posts:

Hayward (1200 feet west of Signal 199) . . Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Redwood Jct.	End double track Westward track
Tracy	Junction switch MP-71.16 to Los Banos line Lathrop sub-division

Spring switches not equipped with facing point locks are located as follows:

Location	Normal Position
West Oakland	1st and 16th line 16th St. line
Elmhurst	Westward Track to Stonehurst Line Stonehurst Line
Elmhurst	End of Double Track Westward Track
Shinn	East end siding Main track
Niles	Junction switch west of station San Jose line
San Jose	Milpitas wye switch Milpitas line main track
Tracy	MP-82.98 Los Banos Main to yard Yard Track

RULE 605. INTERLOCKING

On double track within Oakland yard limits signal operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic signal operator must know that track to be used is clear of opposing engines and trains.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yard leads 40, 50 and 60.

Telephones to 16th Street Tower and West Oakland Tower are located at signal locations west of 16th Street Tower.

An eastward light type interlocking signal installed on Track 2, 100 feet west of the 1st Street Freight Lead crossing.

A flashing yellow lamp unit installed on the mast of the eastward interlocking signal on the Coach Yard lead track and will be displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operating on yard tracks.

Magnolia Tower (First and Chestnut Sts.): Limits extend on eastward main track from signal 1600 feet west of WPRR crossing to dwarf signal 500 feet east of WPRR crossing, and on westward main track from signal 500 feet east of WPRR crossing to dwarf signal 480 feet west of crossing.

When necessary to perform switching within the interlocking limits, signal operator must designate work limits and clock time limit that must not be exceeded and must immediately actuate signal levers to display proceed indication in interlocking signals governing such movements and place red

tags on signal levers controlling such movements. The tags must not be removed or attempt made to change position of power operated switches within such limits until yardmaster or member of crew has orally reported switching completed and clear of work limits.

Employee requesting work limits and clock time limit must state his name, occupation, location and train or engine number. Work and clock time limits granted must be repeated to signal operator and if correct, reponse "OK" will be given by signal operator.

Fruitvale: Limits on main track extend from Signal Bridge 123 to Signal Bridge 127 on westward track, and to westward dwarf signal 680 feet west of Signal Bridge 127 on eastward track.

Melrose: Limits extend between interlocking signals on old electric line and on the drill track between interlocking signal on west side of San Leandro Blvd. and interlocking signal on east side of WPRR crossing and is under the control of WPRR train dispatcher.

When signals do not display proceed indication after approach circuit is occupied, a member of crew must contact WPRR train dispatcher by telephone for instructions and permission to operate push button time release.

When necessary to perform switching within the interlocking limits, a member of crew must obtain clock time limit from WPRR train dispatcher and be governed by signal indication. When Klaxon horn is sounded, SP movements must immediately clear interlocking limits.

Cars or engines must not be left on approach circuits located in advance of interlocking signals.

Telephones, push buttons and instructions for operation of push button time release and dual control switches located in boxes on interlocking signal governing eastward movements on old electric line, on side of Instrument House and on instrument case adjacent to crossing of drill track and WPRR track.

Elmhurst: Interlocking limits extend either side of Junction switches between eastward SA signals on eastward and westward tracks and westward SA signal on Stonehurst Line, westward SA signals on Niles and Santa Clara Lines. The Junction switch of Niles Line and Santa Clara Line MP 13.47, is power operated, dual control switch controlled by Signal Operator at Fruitvale.

When necessary to hand throw dual control switch or when extensive switching is to be performed over the power switch permission must be secured from Signal Operator at Fruitvale and Rules 771 and 772 will govern.

Interlocking portion of SA signals controlled by Signal Operator at Fruitvale Tower.

Trains and engines desiring to make an eastward movement from the Westward Track over the crossover, will receive permission from the Signal Operator to hand operate the spring switch. Member of crew, after throwing the switch, will notify Signal Operator the switch is over and points in position before Operator will clear the Signal (4R) for such movements.

When movement is completed switch must be returned to normal position.

Niles Tower: Limits extend from dwarf interlocking signal on Niles line and interlocking signal on Tracy line, 1685 feet west of WPRR crossing to Signal 298 on Milpitas line and to Signal 425 on Centerville line.

Eastward interlocking signal 650 feet west of WPRR crossing governs movements as follows:

Top unit governs movements to Milpitas line.

Lower unit governs movements to Centerville line.

When Signal 420 or Signal 422 display stop indication, train or engine must stop and not proceed until signal displays proceed indication or permission obtained from signal operator.

Junction switches are dual control switches and are under control of signal operator. When necessary to hand throw these switches, permission must be obtained from signal operator and be governed by Rules 771 and 772. Instructions for operation of dual control switch machines are posted in telephone booths.

Derail near east end of yard Track No. 1 at Niles is electrically locked and under control of signal operator at Niles Tower. Instructions for operation by hand when authorized by signal operator are posted inside of lock box.

Whistle signals:

- To San Jose, o — —,
- To Centerville, — o —,
- To Niles, o — o,
- To Tracy, — o — o.

Newark: Limits extend from signal 50 feet east of wye switch on Centerville line to signal 1150 feet east of wye switch on Santa Clara line, and to signal 650 feet west of wye switch on Elmhurst line, and to dwarf signals on Redwood Jct. line near Newark station building.

Crossover No. 25 from Santa Clara main track to Santa Clara line is equipped with dual control switch machines under control of signal operator.

When necessary to hand throw these switches, permission **MUST** be obtained from the signal operator and be governed by Rules 771 and 772.

Whistle signals:

- To Santa Clara, o — —,
- To Santa Clara line siding, o — — o,
- To Santa Clara line siding extension, — o,
- To Redwood Jct., — o — o,
- To Dumbarton line siding, — o — o o,
- To Centerville, — o —,
- To Elmhurst, o — o.

San Francisco Bay drawbridge, MP 32.53 on Redwood Jct. line:

Tracy: Limits extend from westward SA Signal at MP-70.68 to eastward SA Signal at MP-70.64 on the Niles line and to eastward SA Signal at MP-82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by yardman from control panel located at the base of the Yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control machine. When necessary to hand throw this switch, permission must be secured from the Yardmaster and Rules 771 and 772 govern.

Interlocking portion of the SA signal will be controlled by Tracy Telegraph Operator.

The telegraph operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 680. AUTOMATIC INTERLOCKING

East Oakland, WPRR Crossing yard tracks, MP 7.70: Limits extend between interlocking signals in approach to both sides of crossing.

Derails within interlocking limits equipped with electric locks and after locks have been released derails may be operated by hand throwing lever on switch stand located at crossing.

WPRR Crossing (Stonehurst Branch), MP 13.80:

Limits extend between interlocking signals in approach to both sides of crossing.

Radum, WPRR crossing MP 67.8 (San Ramon Branch): Limits extend between eastward SA signals just west of WPRR crossing and westward interlocking signals just east of WPRR crossing on both legs of wye track.

Signal clearing circuit located 100 feet in advance of eastward interlocking signal on east leg of wye and when occupied will clear signal for trains completing movement over crossing after signal has changed to stop indication account expiration of four minute time interval.

After signal clearing circuit is occupied if signal does not display proceed indication, a member of crew must actuate time release. After time release is actuated signal does not display proceed indication in six minutes, but red indicator on signal mast is illuminated movement may be made through interlocking. If red indicator light is not illuminated and signal displays stop indication, movement must be made under provisions of Rule 663(c).

Signals governing movement from San Ramon Branch to main track will not display proceed indication until junction switch on main track is lined for movement.

Lyoth: WPRR crossing, MP 85.16. Limits extend from eastward SA Signal 825 feet west of crossing to westward SA Signal 475 feet east of crossing.

Signals are approach clearing, if movement over crossing is not completed within 8 minutes after train enters approach circuit, signals will revert to STOP position.

Approach clearing circuits are provided approximately 1050 feet in advance of eastward SA home signal and 500 feet in advance of westward SA home signal to clear signals for trains desiring to complete movement over crossing after signals have assumed STOP position due to expiration of the 8 minute time interval.

Cars or engines are not to be left standing on these circuits.

Push button time release in box marked "SP" and block indicator marked "WP" are installed near crossing.

Instructions for operating time release are posted in box.

If signals indicates STOP for train desiring to make movement over crossing, a member of crew will proceed to crossing to operate time release. If block indicator marked "WP" indicates block clear, press push button until yellow light appears, then release. Approximately 8 minutes later a red light should appear under the button and signal indicate proceed.

If signal does not display proceed indication after time release has been operated, if red indication light on home signal is displayed, train may proceed through interlocking limits.

If home signal indicates STOP and red indicator light is not displayed, train may proceed over crossing as provided in Rule 663(c).

RULE 705—LETTER TYPE INDICATORS

Indicators located as follows:

Illum.	On	Approaching	Authorizes and Requires Movement as Follows:
W.....	67.....	Oakland (First St.)	Freight trains stop, to clear Webster St., (second crossing east of station) and wait until Signal 67 displays proceed indication.
W.....	Lattice Pole	Approx. 20 Ft. west of 23rd Ave.	Fruitvale Tower..... Eastward trains except yard engines stop west of 23rd Ave. and wait until indicator is extinguished or Signal 92 displays proceed indication, unless authorized by Fruitvale Operator to proceed.
W.....	273....	Redwood Jct.....	Westward trains via Dumbarton must stop short of Signal 273 and wait until indicator is extinguished.
W.....	7 ft. mast	MP 44.20 ..	Santa Clara Eastward trains, except first-class, stop short of Reed St. and wait until indicator is extinguished and flashing white light is displayed. Display of flashing white light authorizes movement to interlocking limits Santa Clara.

Milpitas: An illuminated letter type indicator, dispatcher controlled, in service on separate mast 1390 feet west of the west switch Milpitas, and will display the letter "W". When the letter "W" in this indicator is illuminated, the Signal 400 at the west end of Milpitas will display red aspect and Signal 388, 4940 feet west of the indicator, will display yellow aspect.

Eastward trains observing yellow aspect in Signal 388 will proceed prepared to stop before reaching the indicator and not proceed until the "W" light is extinguished or proceed indication is displayed by Signal 400, unless verbal authority is received from the train dispatcher or his representative.

GENERAL REGULATIONS

RULE 825. Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Train crews must not release hand brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 827. Tracy: Passenger trains and trains consisting entirely of passenger equipment, except No. 51 and 52, must approach Tracy at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830. Milpitas: Westward trains not exceeding 75 cars making pick-up or set-out at Milpitas will stop their train with rear end west of Curtis Way, DA 41.1, crossing.

Westward trains exceeding 75 cars making set-out or meeting eastward trains will stop their train east of Capitol Avenue and wait until eastward train is into clear before proceeding.

Eastward trains having set-out or pick-up at Milpitas will leave their train west of the relay post located 500 feet west of the State Highway crossing at MP 40.0 while making set-out or pick-up.

Eastward trains must not exceed 75 cars after set-out or pick-up is made when meeting an opposing train exceeding 75 cars.

Los Banos: Westward freight trains making pick-up or set-out, must stop to clear Place Road which is first crossing east of Main Highway crossing (MP 141.3) east of Los Banos.

Eastward freight trains stopping to pick up or set out cars, will leave train west of Second Street crossing.

Dos Palos: Trains picking up, setting out, or performing station switching at Dos Palos must not block road crossing BA 153.1, east of station building.

Westward trains must leave train east of this crossing while performing work.

AIR BRAKE RULES

RULE 2. Enginemen taking charge of engines for freight and passenger service at West Oakland diesel shop will consider that condensation has been drained from reservoirs, and from moisture and dirt collectors; that sanders are operating properly; that there are no flat spots on wheels; and that communicating signal is operating and cut-out cocks are properly positioned.

RULE 17. Retaining valves must be used on freight and mixed trains as follows:

With less than two dynamic brakes in operation, trains consisting of more than 20 cars which average over 75 tons per operative brake must use 10 retaining valves on head end of train on descending grade from Altamont to Midway, or more if requested by engineer.

FREIGHT TRAINS

RULE 22. Tracy: Trainmen must not couple air hose on outgoing trains at Tracy until train is made up and cabooses and road engine are on train. Coupling cabooses and road engine to train will be considered as an indication that the train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the caboose and road engine have been attached without instructions from the yardmaster, who will see to it that members of the crew are notified in advance.

PASSENGER TRAINS

RULE 39. Running test must be made as follows: Eastward and westward trains at Altamont.

MISCELLANEOUS

Look out for impaired clearance and bad footing from MP 39 to MP 39.80, Alviso, account levee constructed to hold back high tides.

Trains 51, 52, 53 and 54 will make station stop at Tracy Station (Lathrop Line), clearing Mac Arthur Boulevard.

Trains 57 and 58 will make station stop at Tracy Station (Niles Line).

Hillard Salt spur at Newark is restricted to DS 1-12 and 100-122 engines. These engines must not operate beyond first switch on runaround track.

11. Load limit (car and contents):

Redwood Jct.-Tracy.....	263,000 pounds
Oakland-San Jose via Niles.....	263,000 pounds
Elmhurst-Santa Clara.....	263,000 pounds
Tracy-Fresno.....	263,000 pounds
Ingle-Riverdale.....	240,000 pounds

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

13. LOCATION OF STOCK YARDS

Station	Capacity in cars
Milpitas.....	10 (Water)
Newark.....	5 (Water)
Livermore.....	12 (Water)
Ingomar.....	16
Los Banos.....	23 (Water)
Mendota.....	20 (Water)
Helm.....	10 (Water)

30.

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

Mile Post	Location	Description
28.9	Henderson... Highway underpass.....	Side
32.5	Dumbarton... San Francisco Bay drawbridge.....	Side
34.5	Dumbarton... Newark Slough drawbridge.....	Side
42.9	Niles Jct.... Highway underpass.....	Side
30.8	Dresser..... Alameda Creek bridge.....	Side
31.5	Farwell..... Alameda Creek bridge.....	Side
38.3	Pleasanton... WPRR overhead bridge.....	Overhead
55.4	Altamont.... Highway overhead bridge.....	Overhead and side
57.9	Altamont.... Tunnel.....	Side
18.2	San Lorenzo.. San Lorenzo Creek bridge.....	Overhead and side
24.2	Decoto..... WPRR overhead bridge.....	Overhead
29.4	Niles..... Highway underpass.....	Side
36.2	Drawbridge... Warm Springs Slough bridge.....	Side
29.4	Niles Tower.. Street underpass.....	Side
140.2	Los Banos... Warehouse on back track opposite leg of wye.....	Side

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on pages 5 and 6 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, and **OTHER MAXIMUM SPEEDS** appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

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

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	3	MP	MP	Column:	1	2	3
EASTWARD, REDWOOD JUNCTION TO TRACY:						WESTWARD, TRACY TO REDWOOD JUNCTION:					
26.23 to 26.25 (jct. switch).....			20	20	20	71.16 to 70.66 (jct. Los Banos line).....			35	35	35
26.25 to 28.35.....			35	35	35	70.66 to 63.00.....			50	50	50
28.35 to 28.41 (end double track).....			25	25	25	63.00 to 52.00.....			25	25	25
28.41 to 31.51.....			60	60	60	52.00 to 47.48.....			50	50	50
31.51 to 33.00 (bridge).....			30	30	30	★47.48 to 46.66 (Livermore).....			30	30	30
33.00 to 37.00.....			60	60	60	46.66 to 41.43.....			45	45	45
37.00 to 37.51 (Newark).....			15	15	15	★41.43 to 40.57 (Pleasanton).....			25	25	25
37.51 to 42.23.....			50	50	50	40.57 to 37.10.....			35	35	35
42.23 to 42.40.....			15	15	15	37.10 to 29.60 (43.00) Niles Jct.....			25	25	25
★42.40 to 42.78.....			15	15	15	43.00 to 42.78.....			15	15	15
42.78 to 43.00 (29.60) (Niles Jct.).....			15	15	15	★★42.78 to 42.40.....			15	15	15
29.60 to 37.10.....			25	25	25	42.40 to 42.23.....			15	15	15
37.10 to 40.57.....			35	35	35	42.23 to 37.51, except:.....			50	50	50
★40.57 to 41.43 (Pleasanton).....			25	25	25	over spring switch east end Shinn.....			35	35	35
41.43 to 46.66.....			45	45	45	37.51 to 37.00.....			15	15	15
★46.66 to 47.48 (Livermore).....			30	30	30	37.00 to 33.00.....			60	60	60
47.48 to 52.00.....			50	50	50	33.00 to 31.51 (bridge).....			30	30	30
52.00 to 63.00.....			25	25	25	31.51 to 28.41.....			60	60	60
63.00 to 70.66.....			50	50	50	28.41 to 26.25.....			35	35	35
70.66 to 71.16 (jct. Los Banos).....			35	35	35	26.25 to 26.23 (jct. switch).....			20	20	20
NILES TO SAN JOSE YARD:						SAN JOSE YARD TO NILES:					
29.00 to 29.43.....			15	15	15	47.39 to 45.17.....			15	15	15
★29.43 to 29.81.....			15	15	15	45.17 to 29.81.....			60	60	60
29.81 to 45.17.....			60	60	60	★29.81 to 29.43.....			15	15	15
45.17 to 47.39.....			15	15	15	29.43 to 29.00.....			15	15	15
WEST OAKLAND TO SANTA CLARA:						SANTA CLARA TO WEST OAKLAND:					
4.40 to 5.00.....			15	15	15	45.01 to 44.48.....			15	15	15
5.00 to 5.93.....			30	30	30	44.48 to 43.73.....			40	40	40
5.93 to 5.94 (WP crossing).....			20	20	20	43.73 to 40.10.....			60	60	60
5.94 to 6.20.....			30	30	30	40.10 to 39.00.....			40	40	40
★6.20 to 7.20 (Market to Oak St.).....			15	15	15	39.00 to 31.00.....			60	60	60
7.20 to 10.50.....			30	30	30	31.00 to 28.79.....			35	35	35
10.50 to 13.43.....			40	40	40	28.79 to 13.70.....			60	60	60
13.43 to 13.50 (jct. switch and crossover).....			15	15	15	13.70 to 13.50.....			30	30	30
13.50 to 13.70.....			30	30	30	13.50 to 13.43 (jct. switch).....			15	15	15
13.70 to 28.79.....			60	60	60	13.43 to 10.50.....			40	40	40
28.79 to 31.00 (Newark).....			35	35	35	10.50 to 7.20.....			30	30	30
31.00 to 39.00.....			60	60	60	★7.20 to 6.20 (Oak St. to Market St.).....			15	15	15
39.00 to 40.10.....			40	40	40	6.20 to 5.94.....			30	30	30
40.10 to 43.73.....			60	60	60	5.94 to 5.93 (WP crossing).....			20	20	20
43.73 to 44.48.....			40	40	40	5.93 to 5.00.....			30	30	30
44.48 to 45.01.....			15	15	15	5.00 to 4.40.....			15	15	15

Trains must not exceed 20 MPH when passing trains being serviced between Cedar and Kirkham Sts., Oakland.
 ★Regulated by City ordinance. ★★ICC Regulation.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars

Tons Per Operative Brake

70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on pages 5 and 6 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, and **OTHER MAXIMUM SPEEDS** appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

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

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	3	MP	MP	Column:	1	2	3
EASTWARD, AGAINST CURRENT OF TRAFFIC:						WESTWARD, AGAINST CURRENT OF TRAFFIC:					
West Oakland to Elmhurst, except:.....			40	40	40	Elmhurst to West Oakland.....			40	40	40
(subject to lesser speeds on westward track)						(subject to lesser speeds on eastward track), except:					
★5.65 to 6.05.....			20	20	20	★★10.13 to 9.53.....			20	20	20
★★9.55 to 10.13.....			20	20	20	★★ 6.05 to 5.65.....			20	20	20
ELMHURST TO NILES JUNCTION:						NILES JUNCTION TO ELMHURST:					
13.43 to 13.50 (jct. switch).....			15	15	15	29.60 to 29.00.....			25	25	25
13.50 to 29.00.....			50	50	50	29.00 to 13.50.....			50	50	50
29.00 to 29.60.....			25	25	25	Thru Jct. Switch MP 13.43.....			15	15	15
EASTWARD, TRACY TO FRESNO:						WESTWARD, FRESNO TO TRACY:					
82.58 to 83.00 (jct. switch).....			15	15	15	★208.40 to 207.36.....			20	20	20
83.00 to 85.17 (WPRR. crossing).....			45	45	45	207.36 to 206.87 (jct. switch).....			15	15	15
85.17 to 139.75.....			70	60	70	206.87 to 166.68.....			70	60	70
139.75 to 140.10.....			70	55	70	166.68 to 166.39.....			60	60	60
140.10 to 141.30.....			35	35	35	166.39 to 142.05.....			70	60	70
141.30 to 166.39.....			70	60	70	142.05 to 141.30.....			70	55	70
166.39 to 166.68.....			60	60	60	141.30 to 140.10.....			35	35	35
166.68 to 206.12.....			70	60	70	140.10 to 85.17.....			70	60	70
206.12 to 206.87.....			70	45	70	85.17 to 83.00 (WPRR. crossing).....			45	45	45
206.87 to 207.36 (jct. switch).....			15	15	15	83.00 to 82.58 (jct. Niles line).....			15	15	15
★207.36 to 208.40.....			20	20	20						
INGLE TO RIVERDALE						RIVERDALE TO INGLE:					
181.97 to 215.00.....			..	35	35	215.00 to 181.97.....			..	35	35

★Regulated by City ordinance.

★★ICC Regulation.

Do not exceed 15 MPH on main track between east (192.17) and west (191.74) house track switches at San Joaquin.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

On Riverdale Branch maximum speed of trains as shown below must not be exceeded when handled by following engines, subject to further restrictions shown in Speed Restrictions for Trains table above.

DF 12, 15, 608, 609.....30 MPH

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

With Caution
Not Exceeding
MPH

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches.....	10
Through turnouts on other than sidings.....	10
On branches.....	10
Ravenswood, on spur.....	10

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Oakland and Santa Clara	Oakland and San Jose Yard via Niles	Niles and Redwood Jct.	Tracy to Altamont	Livermore to Altamont	Niles to Livermore	Altamont to Niles Altamont to Tracy	Tracy and Fresno	Ingle and Riverdale
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917.....	3400	2650	3725	....	....	....	....	3400	....
DP-5, 6, 8 to 11	6005 to 6016, 6055 to 6058, 5910 to 5915..... 6019 to 6033, 5918 to 5924.....	3375	2625	3700	1100	....	1400	5525	3425	....
DP-13	6034 to 6045..... 6067 to 6068.....	3225	2525	....	....	....	....	....	....	....
DF-1 to 12	6138 to 6461, 8022 to 8303, except..... with 61:16 gear ratio.....	3750	2950	4100	1275	1350	1600	6050	3750	3000
DF-100	5200 to 5202..... with 60:17 gear ratio.....	....	....	....	....	....	....	....	3000	....
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278.....	5000	4075	5000	1675	1775	2150	5000	5000	5000
DF-109, 111	4903 to 4905, 5250 to 5252.....	5000	5000	5000	2550	2575	3050	5000	5000	....
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493.....	6100	4800	6750	2050	2175	2575	10000	6500	....
DF-115, 119, 123, 126	5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507.....	6225	4850	6850	2050	2200	2575	10000	....	....
DF-200 to 206	5100 to 5120.....	2000	1575	2200	625	....	850	3000	2000	1625
DF-300 to 304	4600 to 4623, 4700 to 4703.....	3250	2500	3500	....	1110	1325	4000	3250	....
DF-305, 306	4624 to 4633.....	3600	2800	4000	1125	1200	1475	4000	3600	....
DF-307	4634 to 4654.....	....	....	....	....	....	....	....	....	....
DF-500, 501	4800 to 4815.....	....	....	....	....	....	....	....	....	....
DF-502	4816 to 4818.....	....	....	....	....	....	....	....	5900	....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895.....	3950	3130	4360	1350	1425	1690	10000	3950	....
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871.....	4100	3250	4500	1400	1475	1750	10000	4050	....
DF-800	9001 to 9003.....	7625	7625	8450	2500	2650	3150	10000	7625	....
DS-1 to 8	1000 to 1032.....	1625	1275	1775	520	550	660	4000	1625	1175
DS-9 to 12	1033 to 1090.....	....	....	....	....	....	....	....	....	....
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567.....	2450	1925	2700	800	550	1025	4000	2450	1775
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550.....	3200	2675	3575	1025	1175	1400	4000	3200	2525
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596.....	....	....	....	....	....	....	....	....	....
DS-200, 201	1900 to 1903.....	....	....	....	....	....	....	....	....	925
DF-127	7000 to 7020.....	....	....	....	....	....	....	....	7700	....

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

RULE 5. Time of arrival Tracy for first class trains from Lathrop subdivision will apply at Signal 721. Trains must not pass this point ahead of designated time.

Time at stations between Oakland (16th Street) and Sacramento applies at station sign. Except time for eastward first class trains at Davis via Gerber line applies at east switch north siding.

Time for No. 378 at Sacramento applies at east end Sacramento River bridge MP 88.71.

RULE 14(l). Whistle must be sounded on westward trains immediately on emerging from Tunnel No. 1 at Oleum.

RULE 14(m). Whistle will not be sounded one mile before reaching stations between Oakland 16th Street and San Pablo.

RULE 21-C. Engines to handle trains from Desert Unit West Oakland, may display indicators before leaving West Oakland. Indicators of engines on trains arriving Desert Unit West Oakland, may be displayed until engine reaches West Oakland and must be removed immediately on arrival at delivery track.

RULE 30. Between the hours of 9:00 PM and 6:00 AM engine bell must not be rung, except in emergency, in city limits of Napa.

RULE 82-A. Trains terminating at Bays will register at West Oakland.

Trains originating Desert Unit, West Oakland will obtain train orders and clearance at West Oakland.

Trains to Western Division at Sacramento originating at Antelope must obtain two clearances, one endorsed Sacramento Division, the other endorsed Western Division. Train orders addressed to such trains at Antelope will apply the same as if addressed to them at Sacramento and may leave Sacramento without clearance.

No. 378 and extra trains, except trains of passenger equipment, from Western Division passing Sacramento will not obtain clearance at Sacramento.

Sacramento Northern trains originating at Sacramento 19th & B Streets, or Sacramento-Yolo Port District connection to Western Division will not obtain clearance at Sacramento.

RULE 83. Identification of westward first-class trains between Bahia and Suisun-Fairfield may be made by eastward trains enroute Schellville Branch to be applied at Suisun-Fairfield for crossover movements. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

Train register check of superior trains obtained at West Oakland may be applied at end of double track, Elmhurst, outside of D-251 limits between Sacramento and West Oakland and end of double track Martinez on Tracy line provided superior trains moving in the same direction are not passed in interlocking limits or territory where Rule D-251 is applicable.

RULE 83-A. At the following stations only trains indicated will register:

West Oakland.....	} Trains originating or terminating
Suisun-Fairfield.....	
Davis.....	
Avon.....	
Port Chicago.....	
Pittsburg.....	

Sacramento: Trains originating or terminating, except No. 378 and extra trains passing Sacramento to or from Western Division.

Extra trains will register at Lombard.

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

Suisun-Fairfield..	All trains from Sacramento line to Schellville Branch.
	All trains from Schellville Branch to Sacramento line.
Davis.....	All trains to or from West Valley Sub-division, Sacramento Division.
	All Sacramento Northern Trains.
Lombard.....	All trains from Schellville to Suisun-Fairfield.
	All trains from Suisun-Fairfield to Schellville.
Tracy.....	Nos. 57-58

RULE 93. Second and inferior class trains, extra trains and engines are not required to clear or protect against first-class trains within yard limits where Rule D-251 is applicable.

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

West MP		East MP
	Oakland (Martinez line).....	17.35
	“ (Niles line).....	15.82
	“ (Alvarado line).....	14.01
27.97	Port Costa.....	39.24
	“ (Benicia spur).....	End of track
	“ (Tracy line).....	37.08
47.05	Suisun-Fairfield.....	52.45
	“ (Schellville Branch).....	51.25
74.20	Davis.....	77.37
	“ (Tehama line).....	77.39
131.60	Sacramento (Stockton line).....	136.33
37.50	Avon-Port Chicago.....	42.93
	(San Ramon Branch).....	58.00
46.31	Pittsburg.....	51.68
61.00	Brentwood.....	62.70
78.50	Tracy (Martinez-Los Banos line).....	85.64
66.50	“ (Niles-Lathrop line).....	74.37
59.85	Napa Jct. (Creston-Schellville line).....	64.56
	“ (Calistoga line).....	62.21
	“ (Vallejo line).....	End of track
68.34	Napa-Calistoga.....	End of track
	and including Union Branch	
71.72	Schellville (Lombard-Ignacio line).....	NWP 38.93
	“ (Sonoma line).....	NWP 41.70
58.00	Elmira.....	61.00
	“ (Winters Branch).....	End of track

Oakland: Yardmen must use green flag by day and green light by night when signaling trains to enter or leave yard tracks.

When freight cars are moved from one point to another on main track within Oakland yard limits at night, a white light must be displayed on rear of rear car.

Martinez: No. 10 or No. 12 may make reverse movements against the current of traffic on Eastward Track between Martinez and Signals 340 and 342, Ozol, without providing flag protection for such movements and without obtaining permission from Signal Operator. Signal Operator must not clear Signals 340 or 342 or authorize eastward trains to pass these signals until No. 10 or No. 12 has completed reverse movement against the current of traffic and departed station.

RULE D-97-A. Will apply as follows: Between Oakland (16th Street) and Sacramento; Martinez and Mococo.

RULE 98. Railroad crossings at grade not interlocked:

Trains and engines must approach with caution, and may move over the following crossings without stopping, if crossing clear and no movement approaching on intersecting line:

Benicia: Government Ry., crossing of Benicia spur near Benicia arsenal. If Signal 340 or 341 displays stop indication, flag protection must be provided on intersecting track before movement made over crossing.

Napa Jct.: Big balloon track crossing of Calistoga-Vallejo main track. Schellville line trains using big balloon track need not stop.

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Napa Jct.: Calistoga-Vallejo main track crossing of big balloon track. Calistoga-Vallejo line trains must stop.

Las Juntas: SNRy, crossing of San Ramon Branch.

Nitro: Narrow gauge crossings of spur tracks serving Atlas Powder Company.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

RULE 103-A. Automatic crossing gates:

Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against current of traffic or movements from yard tracks over crossings, must know gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
*Emeryville	Powell Street	7.2
*Emeryville	65th Street	7.7
*Emeryville	66th Street	7.8
*Emeryville	67th Street	7.9
**Berkeley	Virginia Street	9.6
*Berkeley	Gilman Street	10.1
*Albany	Buchanan Street	10.9
*Richmond	Central Avenue	11.6
*Richmond	47th Street (Stege)	13.1
*Richmond	Cutting Blvd.	13.8
*Richmond	23rd Street	14.5
*Richmond	Barrett Avenue	15.1
*Richmond	Roosevelt Avenue	15.3
*Richmond	Pennsylvania Ave.	15.4
*Richmond	Kearney Street	15.6
*San Pablo	Chesley Avenue	16.3
*San Pablo	Market Street	16.6
*San Pablo	County Road No. 17	17.1
*San Pablo	County Road No. 20	17.2
**Martinez	Ferry Street	34.7
*Suisun-Fairfield	Cordelia Road	48.3
*Suisun-Fairfield	Rio Vista Rd.	49.1
*Tolenas	Peabody Road	53.7
**Dixon (West)	"A" Street	67.4
**Dixon (East)	First Street	67.6
Vallejo	Georgia Street	67.6
*Port Chicago	Main Street	41.2
Los Medanos	County Road	50.8
Tracy	U. S. Highway 50	81.1

*Do not operate for against current of traffic movements at territory speeds and Rule 103-A will apply.

**Gates are not actuated when trains are stopping at station to receive or discharge traffic until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down.

Berkeley: Eastward passenger trains making station stop must stop to clear Hearst Street.

Westward passenger trains making station stop must stop with rear of train clear of Virginia Street.

Richmond: Eastward passenger trains stopping at Richmond Station will stop clear of impulse circuit 300 feet west of Barrett Avenue (which is designated by sign reading "Spot") to permit crossing gates to raise for vehicular traffic. When train starts, proceed slowly to permit gates to lower after passing impulse circuit.

Westward passengers train making station stop must stop with rear of train clear of Barrett Avenue.

Martinez: Crossing Gate Key Control installed at Ferry Street to actuate gates when backup movements made to clear junction switch.

Suisun-Fairfield: Eastward passenger trains stopping at station will stop clear of crossing circuit 80 feet west of Union Avenue designated by sign reading "Spot" on instrument case. When train starts, proceed slowly to permit vehicular traffic to clear crossing.

Napa: When switching on or across any street crossing city ordinance requires that member of crew must protect crossing.

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew:

- Suisun-Fairfield... Crossing Union Ave. when moving against current of traffic, A-49.0,
- Thomann..... Crossing highway on Napa Valley Cooperative Winery spur, AB-86.0-C,
- Vacaville..... Crossing on Standard Oil spur, AD-63.15-C,
- Davis..... Crossing County road on University spur, A-75.7-C,
- Port Chicago..... Crossing County road on leads to Naval Supply Base, B-40.8-C, B-41.0-C,

Pittsburg..... Crossings on industry spurs, B-47.8-C, B-48.1-C,

Brentwood..... Crossing highway on Irrigated Farms spur, B-62.6-C.

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

Avon..... San Ramon line, for siding,
Suisun-Fairfield Napa Jct. line, for westward siding,
Napa Jct..... Suisun-Fairfield line, for Schellville line,
at MP 61.60.

Schellville..... Schellville Branch, for NWPRR main track,

Napa Jct.: Track known as big balloon is Schellville line main track.

RULE 105. Suisun-Fairfield: Eastward siding is first track south of eastward main track extending from MP 47.43 to MP 48.82.

Westward siding is first track north of westward main track extending from MP 49.43 to MP 47.43.

Westward trains entering siding, if length of train permits, must stop with rear of train clear of Union Avenue crossing.

North siding is first track north of main track on Schellville Branch extending from MP 48.94 to MP 49.95, to be used by trains from Schellville Branch to Sacramento line. May be used by other trains only when instructed by dispatcher.

Davis: Eastward siding is first track south of eastward main track extending from MP 75.88 to MP 76.71.

Westward siding is first track north of westward main track extending from MP 77.03 to MP 75.73.

North siding is first track west of main track on Gerber line extending from MP 75.79 to MP 76.52.

RULE 107. Station train indicators are provided in approach to following stations:

Eastward	Westward
Berkeley (2)	Richmond
Crockett	
Martinez	
Suisun-Fairfield	

When illuminated these indicators will convey the following information:

TRAIN—Train at platform on opposite track.

CLEAR—Indicator in service.

When neither TRAIN or CLEAR is illuminated, indicator is out of service and report must be made to chief train dispatcher as soon as practicable.

RULE 221. West Oakland, Rodeo and Avon are train-order offices only for trains originating.

Trains operating on Vallejo Branch must obtain clearance at Lombard OK'd by the Chief Train Dispatcher.

RULE D-251. Will apply as follows: On westward track between Sacramento and Oakland (16th Street). On eastward track between Oakland (16th Street) and Sacramento.

RULE 291-A. Flashing yellow lamp unit installed on the mast of the eastward interlocking signal on the Coach Yard lead track and is displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Interlocking signals are listed as "P-I" or "P-SA".

Eastward Signal	Protection	Westward Signal
P-I	Collision detector, highway underpass west end of wye, Davis	P-I
	Spring switch, end double track, Mococo	P-359
P-464	Collision detector, highway underpass, MP 47.19 (Pittsburg)	P-479
P-510	Collision detector, highway underpass, MP 50.97 (Los Medanos)	P-519
P-710	Spring switch, junction to Los Banos line, Tracy	
	Spring switch to yard, Tracy	P-829
P-SA	Dragging equipment detector, MP 34.8	
	Dragging equipment detector, MP 35.9	P-347

A 2-indication, light type indicator installed just below interlocking signal P-SA located 550 feet west of draw span, and a 2-indication, light type indicator attached to the mast of signal P-347, are designated as dragging equipment indicators.

They will display red aspect with signal at "STOP" when actuated by dragging equipment detector, and lunar white aspect when not actuated by dragging equipment detector.

Crews of trains stopped by signals P-SA or P-347 with the red indicator light illuminated, will inspect their train for dragging equipment.

Signal may be cleared and indicator light changed to lunar white by pressing push button located on signals P-SA and P-347 after first complying with Rule 306.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Cannon: Electric locks will be installed on crossover switches and on switch for Sacramento Northern connection to the eastward track. Page 4, Special Instructions will govern.

Ozol: When Signals 340 and 342 display stop indication, eastward train or engine must stop and not proceed until signal displays proceed indication or permission to proceed obtained from Signal Operator at Martinez. Telephone located about 100 feet east of Signal 340.

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossovers near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 735 governs movements on main track. Bottom unit governs movements into yard over crossover. Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track, over the crossover. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

RULE 512. Block indicators adjacent to east switch of crossover and switch to Sacramento Northern connection apply to the eastward main track only.

RULE 513. On Westward trip before making crossover movement at Cannon, permission must be received from signal operator, Davis.

On Eastward trip before entering Main Track at Cannon, permission must be received from signal operator, Davis.

PUSH BUTTONS—Tracy:
Push buttons are located on Signal 827 on Los Banos line, and instrument case east of MacArthur Blvd. on Lathrop line to clear signals over junction switch.

Push buttons are located on instrument case opposite Signals 828 and 826, Los Banos line, west of spring switch to yard.

RULE 516. Overlap posts:
Los Medanos (250 feet west of Signal 509).....Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Mococo.....	End double track.....Westward track
Tracy.....	Junction switch MP 71.16 to Los Banos line.....Lathrop Sub- division

Spring switches not equipped with facing point locks are located as follows:

Location	Normal Position
*West Oakland.....	1st and 16th St. line...16th St. line
*Stege.....	Seaver wye.....East leg of wye
*Ozol.....	East end siding.....Main track
*Ozol.....	West end siding.....Main track
Martinez.....	Junction switch.....Bridge line
*Suisun-Fairfield.....	East end north siding...Main track
*Lombard.....	East end siding.....Main track
*Lombard.....	West end siding.....Main track
Tracy.....	MP 82.98 Los Banos main to yard.....Yard Track

*Equipped with switch-point indicator.

RULE 605. INTERLOCKING

On double track within Oakland yard limits signal operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic signal operator must know that track to be used is clear of opposing engines and trains.

Trains and engines moving out westward limits, West Oakland interlocker toward Bays are operated on yard tracks.

Oakland, 16th St.: Limits extend from signals 427 feet east of MP 5 on the Martinez line to Signal Bridge 204 and from Signal Bridge 205 to Signal Bridge 206.

Whistle signals:
To West Oakland Yard, o — —,
From AT&SFRy interchange to West Oakland, — — —,
To AT&SFRy interchange, o — o.
Telephones to 16th Street Tower and West Oakland Tower located at signal locations west of 16th Street Tower.
Telephones to 16th Street Tower at the following locations:
Signal Bridge 205 west end of Shellmound,
Signal Bridge 206 east end of Shellmound,
East end of Judson Spur, Shellmound.

West Oakland (First and Cedar Sts.): Limits extend from signals at Cedar Street on Niles line to signals 427 feet east of MP 5 on Martinez line.

Eastward signals on First Street lead 227 feet west of First Street freight lead crossing, eastward signal on washer track 144 feet west of freight lead, eastward signals on 16th Street lead at clear point, 187 feet west of freight lead switch, westward signals on diesel tracks, coach lead and yard leads 40, 50 and 60.

Telephones to 16th Street Tower and West Oakland Tower are located at signal locations west of 16th Street Tower.

A flashing yellow lamp unit, Rule 291-A, installed on the mast of the eastward interlocking signal on the Coach Yard lead track will and be displayed in both eastward and westward directions. Illumination of this flashing yellow light observed from either direction will authorize an eastward reverse move toward 16th Street or Bays following a westward move into the Coach Yard which does not clear the interlocking plant.

Martinez: Limits extend on eastward main track from home signal 600 feet east of station building to westward dwarf signals 938 feet east of station building on Tracy line and on Suisun Bay bridge line.

Limits extend on westward main track from signals 2350 feet east of station building on Tracy line and on Suisun Bay bridge line, to interlocking signal 50 feet west of junction switch. Signal operator's permission must be obtained before fouling westward main track at crossover and switches from spurs to westward main track between Martinez and Ozol.

Whistle signals:
To Bridge line, o — —,
To Tracy line, — o — —.
Suisun Bay Bridge, Martinez: Bridge zone limits extend on both tracks from home signals 800 feet east of draw span to home signals 550 feet west of draw span.

Davis: Limits extend on eastward and westward main tracks from interlocking signals at MP 75.25 to interlocking signal on signal bridge at MP 75.98 on westward main, interlocking signals 325 feet west of MP 75.98 on eastward main and east pass, interlocking signal at MP 75.97 on the west pass and to westward interlocking signal at MP 75.55 on the Gerber line.

The switch to the University spur is hand throw. Member of crew will operate hand throw switch after receiving permission of signal operator. Dwarf signal at clear point is an interlocking signal.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

Cranks for hand operating power switches are mounted on signal instrument case on south side of track at west end of street underpass on the west end, on instrument case on south side of track opposite P.G.& E. switch on the Sacramento end, and on instrument case between 3rd Street and 4th Street on the Woodland end.

When necessary to hand operate power switches, permission must be obtained from the signal operator and be governed by Rules 771 and 772.

Instructions for hand operating power switches are mounted on cases above crank holders.

Whistle signals:

To or from Sacramento from or to Woodland line, o — —, Western Division eastward trains to enter siding, — o —.

Sacramento River Drawbridge: Eastward trains failing to receive green aspect in approaching Signal 878 must stop at MP 88, unless semi-automatic signal at MP 88.4 indicates "proceed."

Brazos Drawbridge over Napa River: Movement over bridge not permitted unless signal operator on duty.

Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.62 on the Niles line and to eastward SA Signal at MP 82.18 on the Martinez line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by yardman from control panel located at the base of the Yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is equipped with a dual control machine. When necessary to hand throw this switch, permission must be secured from the Yardmaster and Rules 771 and 772 govern.

Interlocking portion of the SA signal controlled by Tracy Telegraph Operator.

The telegraph operator shall determine that switch has been lined for proper route before clearing a signal.

RULE 680. AUTOMATIC INTERLOCKING

SNRy Crossing, MP 86.90: Limits extend between interlocking signals in approach to both sides of crossing.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal Approaching	Authorizes and Requires Movement as Follows
W..... 77.....	Oakland (16th St.)	Stop east of 67th St. Emeryville and wait until Signal 77 displays proceed indication.
S..... 224.....	Pinole.....	Enter eastward siding Pinole and remain in siding until letter "M" is displayed.
M..... 7-ft. mast east end eastward siding... Pinole.....		Enter main track and proceed as prescribed by Rule D-251.
S..... 245.....	Pinole.....	Enter westward siding Pinole and remain in siding until letter "M" is displayed.
M..... 7-ft. mast west end westward siding... Pinole.....		Enter main track and proceed as prescribed by Rule D-251.
S..... 409.....	Bahia.....	Enter siding Bahia and remain in siding until letter M is displayed.
M..... West end center siding... Bahia.....		Enter main track and proceed as prescribed by Rule D-251.
S..... 354.....	Bahia.....	Enter siding at Bahia and remain in siding until letter M displayed.
M..... East end center siding... Bahia.....		Enter main track and proceed as prescribed by Rule D-251.

Illum. Letter	On Signal Approaching	Authorizes and Requires Movement as Follows
S..... 505.....	Suisun-Fairfield...	Enter siding Suisun-Fairfield and remain in siding until letter M displayed.
M..... 7-ft. mast west end westward siding... Suisun-Fairfield...		Enter main track and proceed as prescribed by Rule D-251.
S..... 450.....	Suisun-Fairfield...	Enter siding at Suisun-Fairfield.
W..... 672.....	Dixon.....	Eastward train must stop and not proceed until indicator is extinguished except trains may proceed not exceeding restricted speed to the next home signal after receiving verbal authority from the train dispatcher. A telephone is located at Signal 672.
H..... 702.....	Tremont...	Eastward trains must stop west of road crossing A-71.6 at Tremont and member of crew open small door on track side of Hot Box Locator, located west of crossing A-71.6. Numerals displayed by indicators inside the box indicate location of hot bearings in relation to rear axle of train. Top row indicates hot bearings on right side of train, lower row on left side of train in direction of movement. Indicators will display a maximum of four hot bearings on each side of train. All journals of car indicated must be inspected as well as all journals of each adjoining car. After hot bearing has been located from information furnished by indicators, press black push button to cancel numbers on the indicator. Door must be closed and secured with switch lock. A phone is located at Crossing A-71.6 for giving information to train dispatcher.
S..... 783.....	Davis.....	Enter westward siding (applies to freight trains only).

Display of letter "M" does not relieve conductors or engineers of compliance with Rule 513.

RULE 715. Automatic Train Stop eastward track from Martinez to westward dwarf signal 300 feet east of draw span.

When Signal 328 displays yellow aspect, trains must not exceed 15 MPH from this signal to track magnet located 550 feet west of semi-automatic signal, opposite white concrete marker block.

Automatic Train Stop westward track from 100 feet east of Signal 357 to Martinez.

When Signal 347 displays yellow aspect, trains must not exceed 15 MPH from this signal to track magnet located 1250 feet east of semi-automatic signal, opposite white mark on bridge.

GENERAL REGULATIONS

RULE 825. Elmira: Not less than three hand brakes must be set on west end of cars left standing except with less than three hand brakes all brakes must be set.

Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Train crews must not release brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 827. Passenger trains operating between West Oakland and Gerber, except streamlined Cascade and Shasta Daylight, making station stop at Davis, must approach at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

Tracy: Passenger trains and trains consisting entirely of passenger equipment, except Nos. 51 and 52, must approach Tracy at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830. Martinez: When trains 51 and 9 performing station work block Ferry Street crossing, trains 12 and 58 will approach Ferry Street and wait until trains 51 and 9 have cleared and vehicular traffic allowed to move before blocking this crossing.

Trains 9, 11 and 51 will stop with units clear of Ferry Street crossing, and, if train is of sufficient length, after head end work completed second stop will be made blocking Ferry Street to detrain passengers.

Trains 57 and 101 will make normal station stop, blocking Ferry Street but not to exceed 10-minutes, except when No. 57 transfers to No. 10 two stops will be necessary; first stop to be made with units to clear Ferry Street.

Eastward passenger trains making station stop at Martinez, except Nos. 12, 52 and 58 will make normal station stop, blocking Ferry Street, but not to exceed 10-minutes.

Schellville: Trains arriving and departing and when switching movements are being made over Highway Crossing No. 12, Schellville crossing will be cleared after each move is made to allow vehicular traffic to pass.

Tracy: Trains 51, 52, 53 and 54 make station stop at Station (Lathrop Line), clearing MacArthur Boulevard.

Trains 57 and 58 will make station stop at Station (Los Banos Line).

RULE 858. Between Oakland (16th Street) and San Francisco passengers and hand baggage will be transported by bus; checked baggage, mail and express by truck.

AIR BRAKE RULES

RULE 2. Enginemen taking charge of engines for freight and passenger service at West Oakland diesel shop will consider that condensation has been drained from reservoirs, and from moisture and dirt collectors; that sanders are operating properly; that there are no flat spots on wheels; and that communicating signal is operating and cut-out cocks are properly positioned.

RULE 17. Retaining valves must be used on freight and mixed trains as follows:

With less than two dynamic brakes in operation, trains consisting of more than 110 cars which average over 60 tons per operative brake must use 20 retaining valves on head end of train on descending grade from Creston to Cordelia.

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hose on outgoing trains at Port Costa, Ozol or Suisun-Fairfield until train is made up and caboose and road engine are on train. Coupling caboose and road engine to train will be considered as an indication that the train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the caboose and road engine have been attached without instructions from the yardmaster, who will see to it that members of the crew are notified in advance.

RULE 33. When gross tonnage of freight train handling cars with single capacity brakes exceeds 80 tons per operative brake, maximum speed of train must not exceed 45 MPH, except when gross tonnage exceeds 85 tons per operative brake, maximum speed must not exceed 25 MPH on descending grades of 1.2% to 1.5% and 20 MPH on descending grades in excess of 1.5%. Grades where such restrictions apply will be:

OAKLAND TO SACRAMENTO

Maximum speed of freight trains must not exceed 20 MPH on descending grade between the following milepost locations when gross tonnage exceeds 85 tons per operative brake:

Eastward

MP 33.8 to MP 36.0 (Eastbound main)

SHELLVILLE BRANCH

Westward

MP 55.0 to MP 58.0

Maximum speed of freight trains must not exceed 25 MPH on descending grade between the following milepost locations when gross tonnage exceeds 85 tons per operative brake:

Eastward

MP 58.0 to MP 62.8

CALISTOGA BRANCH

Westward

MP 77.0 to MP 79.0

RULE 39. Running test must be made as follows: Eastward and westward trains at Creston.

MISCELLANEOUS

Westward passenger trains making station stop at Martinez will stop with units clear of Ferry Street Crossing, and if train is of sufficient length after head end work completed, second stop will be made to detrain passengers.

Eastward passenger trains making station stop at Martinez, except No. 12 and No. 10, will make normal station stop blocking Ferry Street, but not to exceed ten minutes.

No. 12 must be routed via Mococo Line and will pull rear end to clear Ferry Street. After head end work completed and passengers entrained, train will make reverse movement, head end to clear junction switch as follows:

Before making reverse movement against current of traffic over Ferry Street on eastward track, a member of crew will lower the crossing gates by operating switch key control located on the east side of the crossing gate adjacent to station building, turning switch key to RIGHT to lower crossing gates, and remove key before commencing movement. If reverse movement is delayed after crossing gates are lowered, the gates may be raised by use of key control; turn key to LEFT to raise crossing gates.

Before reverse movement is made from Mococo Line, operator at Martinez will operate toggle switch on the control machine, holding Signals 340 and 342 in stop position until backup movement is completed, after which toggle switch must be returned to normal position.

No. 10 when making transfer at Martinez off Train No. 57 will also be lined to the Mococo Line and reverse movement made in accordance with above instructions.

10. Engines listed must not operate on tracks shown below.

Class of Engine	Restricted Tracks
All.....	Rocktram—Three spur tracks diverging from interchange tracks on river side of main track.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on pages 5 and 6 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT, and OTHER MAXIMUM SPEEDS** appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

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

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	3	MP	MP	Column:	1	2	3
EASTWARD, WEST OAKLAND TO SACRAMENTO:						WESTWARD, SACRAMENTO TO WEST OAKLAND:					
4.9 to 4.25.....			15	15	15	89.00 to 88.54.....			10	10	10
4.25 to 4.81 (crossing).....			20	20	20	88.54 to 86.82 (SNRy. crossing).....			45	45	45
4.81 to 7.75.....			45	45	45	86.82 to 76.00.....			79	60	70
7.75 to 16.31.....			60	60	60	76.00 to 75.20, except:.....			45	40	45
16.31 to 21.50.....			70	60	70	★★75.60 to 75.36 (West leg wye and jct. switch).....			20	20	20
21.50 to 34.40.....			45	45	45	75.20 to 49.00.....			79	60	70
★34.40 to 34.70 (Martinez).....			30	30	30	49.00 to 48.38.....			55	55	55
34.70 to 35.50.....			45	45	45	48.38 to 35.50.....			79	60	70
35.50 to 37.12.....			79	60	70	35.50 to 34.70.....			45	45	45
EASTWARD, AGAINST CURRENT OF TRAFFIC:						WESTWARD, AGAINST CURRENT OF TRAFFIC:					
West Oakland to Sacramento.....						Sacramento to West Oakland.....					
(Subject to lesser speeds on westward track), except:						(Subject to lesser speeds on eastward track), except:					
31.10 to 31.11 (Ozol).....			35	35	35	34.21 to 34.20 (Ozol).....			35	35	35
34.20 to 34.21 (Ozol).....			35	35	35	31.11 to 31.10 (Ozol).....			35	35	35
75.20 to 76.00.....			20	20	20	76.00 to 75.20.....			20	20	20
EASTWARD, MARTINEZ TO TRACY:						WESTWARD, TRACY TO MARTINEZ:					
34.70 to 35.88.....			35	35	35	82.58 to 82.24 (jct. Los Banos line).....			35	35	35
35.88 to 35.91.....			25	25	25	82.24 to 81.83 (jct. Niles line).....			20	20	20
35.91 to 48.15.....			79	60	70	81.83 to 80.70.....			45	45	45
48.15 to 48.90.....			79	50	70	80.70 to 53.60.....			79	60	70
★48.90 to 48.95 (Pittsburg).....			25	25	25	★★★53.60 to 53.30 (Antioch).....			45	45	45
48.95 to 53.30.....			79	60	70	53.30 to 49.70.....			79	60	70
★★★53.30 to 53.60 (Antioch).....			45	45	45	49.70 to 48.95.....			79	50	70
53.60 to 80.70.....			79	60	70	★48.95 to 48.90 (Pittsburg).....			25	25	25
80.70 to 81.83.....			45	45	45	48.90 to 35.91.....			79	60	70
81.83 to 82.24 (jct. Niles line).....			20	20	20	35.91 to 34.70.....			30	30	30
82.24 to 82.58 (jct. Los Banos line).....			35	35	35						

★Regulated by City ordinance. ★★ICC Regulation. ★★★Regulated by PUC order.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

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

TERRITORY			FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	MP	MP	Column:	1	2
EASTWARD, AVON TO RADUM:					WESTWARD, RADUM TO AVON:				
38.10 to 44.64			25	25	67.80 to 57.02			25	25
44.64 to 44.67 (bridge)			15	15	57.02 to 56.99 (bridge)			15	15
44.67 to 49.22			25	25	56.99 to 49.25			25	25
49.22 to 49.25 (bridge)			15	15	49.25 to 49.22			15	15
49.25 to 56.99			25	25	49.22 to 44.67			25	25
56.99 to 57.02 (bridge)			15	15	44.67 to 44.64 (bridge)			15	15
57.02 to 67.80			25	25	44.64 to 38.10			25	25
EASTWARD, ELMIRA TO ESPARTO:					WESTWARD, ESPARTO TO ELMIRA:				
59.60 to 76.00			25	25	90.35 to 76.00			15	15
76.00 to 90.35			15	15	76.00 to 59.60			25	25
EASTWARD, SUISUN-FAIRFIELD TO SCHELLVILLE:					WESTWARD, SCHELLVILLE TO SUISUN-FAIRFIELD:				
48.93 to 49.30			15	15	NWPRR. on wye to 72.60			10	10
49.30 to 61.47			35	35	72.60 to 65.25			35	35
61.47 to 61.77 (Napa Jct.)			15	15	65.25 to 64.15 (drawbridge)			15	15
61.77 to 64.15			35	35	64.15 to 61.77			35	35
64.15 to 65.25 (drawbridge)			15	15	61.77 to 61.47			15	15
65.25 to 72.60			35	35	61.47 to 49.30			35	35
72.60 to NWPRR. on wye			10	10	49.30 to 48.93			15	15
EASTWARD, NAPA JUNCTION TO VALLEJO:					WESTWARD, VALLEJO TO NAPA JUNCTION:				
61.60 to 61.75			15	15	69.00 to 67.01			25	25
61.75 to 67.00			25	25	67.01 to 67.00 (Tennessee St.)			15	15
67.00 to 67.01			15	15	67.00 to 61.75			25	25
67.01 to 69.00			25	25	61.75 to 61.60			15	15
EASTWARD, NAPA JUNCTION TO CALISTOGA:					WESTWARD, CALISTOGA TO NAPA JUNCTION:				
61.25 to 61.30			15	15	95.78 to 87.70			25	25
61.30 to 69.20, except:			35	35	★87.70 to 87.00 (St. Helena)			20	20
Thru turnouts at MP 65.86 and 66.40			15	15	87.00 to 79.50			25	25
★69.20 to 71.10 (Napa)			25	25	79.50 to 71.78			35	35
71.10 to 71.60			35	35	71.78 to 71.60 (highway crossing)			15	15
71.60 to 71.78 (highway crossing)			15	15	71.60 to 71.10			35	35
71.78 to 79.50			35	35	★71.10 to 69.20 (Napa)			25	25
79.50 to 87.00			25	25	69.20 to 61.30, except:			35	35
★87.00 to 87.70 (St. Helena)			20	20	Thru turnouts at MP 66.40 and MP 65.86			15	15
87.70 to 95.78			25	25	61.30 to 61.25			15	15
EASTWARD, WEST NAPA TO UNION:.....					WESTWARD, UNION TO WEST NAPA:.....				
			15	15				15	15

★Regulated by City ordinance.

On Calistoga Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in **SPEED RESTRICTIONS FOR TRAINS TABLE** above:

MP 78.56 to MP 95.78

DP 3, 4, 7, 8, 9, 12	10 MPH
DF 114a, 121, 122, 124, 125, 127, 303	10 MPH
DP 4, 5, 6, 10, 11, 13	15 MPH
DF 101, 103 to 108, 110, 112, 114, 115, 117 to 120, 123, 126, 300 to 302	15 MPH
DF 116, 800	20 MPH
DS 1, 4, 5	20 MPH
DS 2, 3, 6, 7, 8	25 MPH

On Union Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in **SPEED RESTRICTIONS FOR TRAINS TABLE** above:

DF 1, 6, 7, 109, 111, 306, 500, 501	10 MPH
DS 101 to 103, 106, 107, 109, 110, 112 to 114, 117, 119 to 122	10 MPH

On Winters Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in **SPEED RESTRICTIONS FOR TRAINS TABLE** above:

MP 59.62 to MP 65.96

DF 12, 15, 608, 609	15 MPH
DF 4, 10, 11, 13, 14, 600 to 604, 606, 617, 620	20 MPH

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

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Oakland and Martinez	Martinez to Bridge Summit	Bridge Summit to Sacramento	Sacramento to Martinez ^①	Martinez and Tracy
DP-4, 7, 12	{ 6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917.....	3400	1400	2975	2650	3400
DP-5, 6, 8 to 11	{ 6005 to 6016, 6055 to 6058, 5910 to 5915..... 6019 to 6033, 5918 to 5924.....	3425	1400	2975	2650	3425
DP-13	{ 6034 to 6045..... 6067 to 6068.....	....	....	....	....	....
DF-1 to 12	{ 6138 to 6461, 8022 to 8303, except..... with 61:16 gear ratio..... with 60:17 gear ratio.....	3750 3000	1600	3300	2950	3750 3000
DF-100	5200 to 5202.....	5000	2475	4600	4100	5000
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278.....	5000	3050	5000	5500	5000
DF-109, 111	4903 to 4905, 5250 to 5252.....	5000	3050	5000	5500	5000
DF-114, 116 to 118, 120 to 122, 124, 125	{ 5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493.....	6100	2575	5425	4800	6100
DF-115, 119, 123, 126	{ 5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507.....	.....	.....	.....	.....	.....
DF-200 to 206	5100 to 5120.....	2000	850	1775	1575	2000
DF-300 to 304	4600 to 4623, 4700 to 4703.....	3250	1350	2900	①2550	3250
DF-305, 306	4624 to 4633.....	3600	1475	3150	2800	3600
DF-307	4634 to 4645.....	.....	.....	.....	.....	.....
DF-500, 501	4800 to 4815.....	.....	.....	.....	.....	.....
DF-502	4816 to 4818.....	.....	.....	.....	.....	.....
DF-602, 603, 605 to 607, 611, 612, 616	{ 5600 to 5719, 5730 to 5844, 5872 to 5895.....	3950	1700	3520	3130	3950
DF-608 to 610, 613, 614, 615	{ 5720 to 5729, 5845 to 5871.....	4050	1750	3650	3250	4050
DF-800	9001 to 9003.....	7625	3150	6675	5950	7625
DS-1 to 8	1000 to 1032.....	1625	660	1425	1275	1625
DS-9 to 12	1033 to 1090.....	.....	.....	.....	.....	.....
DS-100 to 109, 111, 115 119	{ 1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567.....	2450	1025	2650	1925	2450
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	3200	1400	2775	2475	3200
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596.....	.....	.....	.....	.....	.....
DS-200, 201	1900 to 1903.....	.....	.....	.....	.....	.....

①Applies Sacramento to Suisun-Fairfield only.
②Will not apply to Sacramento Northern Engines.

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

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Suisun-Fairfield to Napa Jct.	Napa Jct. to Suisun-Fairfield	Napa Jct. and Larkmead Union and West Napa	Larkmead and Calistoga	Napa Jct. to Schellville Napa Jct. to Vallejo	Schellville to Napa Jct.
DF-1 to 12	{ 6138 to 6461, 8022 to 8303, except..... with 61:16 gear ratio..... with 60:17 gear ratio.....	1000	1300	....	....	6050	2475
DF-100	5200 to 5202.....	....	....	....	....	....	....
DF-101, 103 to 108, 110, 112	4900 to 4902, 5203 to 5248, 5253 to 5278.....	1575	2100	3825	....	5000	3825
DF-109, 111	4903 to 4905, 5250 to 5252.....	1875	2525	2450	....	5000	4700
DF-114, 116 to 118, 120 to 122, 124, 125	{ 5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493.....	1600	2175	2100	....	10000	4200
DF-115, 119, 123, 126	{ 5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507.....	1650	2100	....	....	....	....
DF-200 to 206	5100 to 5120.....	550	750	725	725	3000	....
DF-300 to 303	4600 to 4621, 4700 to 4703.....	825	1075	1050	....	4000	2075
DF-305, 306	4624 to 4633.....	900	....	....	....	....	....
DF-307	4634 to 4645.....	....	....	....	....	....	....
DF-500, 501	4800 to 4815.....	....	....	....	....	....	....
DF-502	4816 to 4818.....	....	....	....	....	....	....
DF-602, 603, 605 to 607, 611, 612, 616	{ 5600 to 5719, 5730 to 5844, 5872 to 5895.....	1080	1400	....	....	....	....
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871.....	1100	1475	....	....	10000	2725
DS-1 to 8	1000 to 1032.....	400	550	525	525	4000	1050
DS-9 to 12	1033 to 1090.....	....	....	....	....	....	....
DS-100 to 109, 111, 115, 119	{ 1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567.....	800	1050	....	....	4000	2000
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550.....	775	1050	①1025	....	4000	2050
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596.....	....	....	....	....	....	....
DS-200, 201	1900 to 1903.....	300	400	375	375	....	....

①DS-118 not permitted to operate between Union and West Napa.
 Following nominal class engines not permitted to operate between Yountville and Larkmead:
 DF-1 to 15, 304 to 307, 500 to 502, 600 to 617, 620
 DS-9 to 12, 100 to 114, 117 to 122

Following nominal class engines not permitted to operate between Union and West Napa:
 DF-2 to 5, 8 to 15, 600 to 617, 620

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

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

RULE 5. Time of arrival Tracy for first-class trains from Lathrop Subdivision will apply at Signal 721. Trains not pass this point ahead of designated time.

Time for freight trains at Tracy to and from Lathrop Subdivision will apply at clearance point to crossover west of Banta Road Crossing MP 73.5.

Freight trains arriving Tracy from Martinez and Niles subdivision must be clear of main track in advance of these times as prescribed by Rule 86.

RULE 14(k). Will not apply in CTC limits.

RULE 82-A. Trains to Western Division at Polk, originating at Sacramento, Roseville or Antelope, must obtain two clearances, one endorsed Sacramento Division, the other endorsed Western Division. Train orders addressed to such trains at Sacramento, Roseville or Antelope will apply the same as if addressed to them at Polk.

First-class trains to or from Western Division at Polk will assume the corresponding number and schedule at Polk without clearance.

Second-class trains and sections thereof, authorized on Western Division (Merced Subdivision) from Lathrop, may display indicators and signals, if any, as such schedule or section on Sacramento Division Roseville or Antelope to Polk and on Lathrop Subdivision Polk to Lathrop, operate as authorized by Rules D-97-A and D-251 Roseville or Antelope to Polk and Polk to Lathrop and register accordingly at Stockton.

Extra trains authorized at Stockton for movement on Merced Subdivision may leave Lathrop without clearance.

Regular trains from Merced Subdivision to Lathrop Subdivision may assume the corresponding number and schedule at Lathrop without clearance.

Second-class trains and sections thereof, authorized on Western Division (Merced Subdivision) to Lathrop and moving between Lathrop and Roseville, may display the same indicators and signals, if any, on Lathrop Sub-division Lathrop to Polk and on Sacramento Division Polk to Roseville, operate as authorized by Rules D-97-A and D-251 Lathrop to Polk and Polk to Roseville and register accordingly at Stockton and Roseville.

RULE 83. Sections of schedules authorized at Stockton for movement on Merced Subdivision need not ascertain that preceding sections of the same schedule have left Lathrop. A leading section must not permit a following section to pass between Stockton train-order office and junction switch Lathrop except as provided by last paragraph of Rule 85.

Identification may be made by westward trains between Stockton and Lathrop to be applied at Lathrop on Merced Subdivision. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

RULE 83-A. At the following stations only trains indicated will register:

- Lathrop.....Regular trains, except trains originating or terminating on east leg of wye.
- Sacramento...Trains originating or terminating.
- Extra trains will register at Stockton.
- Extra trains, except extra trains originating or terminating on east leg of wye, will register at Lathrop.

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

- Lathrop.....Lathrop Subdivision trains.
- Merced Subdivision trains originating or terminating on west leg of wye.
- Stockton....All trains, except trains originating or terminating.

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

Second and inferior class trains, extra trains and engines are not required to clear or protect against first-class trains within yard limits where Rule D-251 is applicable.

West MP		East MP
78.50	Tracy (Martinez-Los Banos line).....	85.64
66.50	“ (Niles-Lathrop line).....	74.37
79.50	Lathrop (Tracy-Stockton line).....	83.04
	“ (Merced line).....	94.29
85.07	Stockton.....	93.72
	“ (Oakdale Branch).....	End of track
101.57	Lodi.....	104.25
	“ (Kentucky House Branch).....	End of track
	“ (Woodbridge Branch).....	End of track
111.10	Galt.....	113.21
	“ (Ione Branch).....	End of track
85.51	Sacramento.....	95.35
131.60	“ (Stockton line).....	136.33

Oakdale: Trains and engines must move with caution between F and G Sts. expecting to find main track occupied by Sierra Ry trains or engines.

RULE D-97-A. Will apply between MP 81.24 and MP 92.2.

RULE 98. Railroad crossings at grade not interlocked: Trains and engines must approach with caution, and may move over the following crossings without stopping, if crossing clear and no movement approaching on intersecting line:

- Stockton...CCTCo., crossing of Oakdale Branch near MP 92.0,
- Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:
- Brandywine. CCTCo., crossing of Kentucky House Branch, Oakdale....AT&SFRy, crossing of Oakdale Branch, MP 116.7 on Ione
- Branch...CCTCo., crossing of Ione Branch.
- Drawbridge not interlocked:

Stockton: AT&SFRy. crossing on connection to SPB-Ry. at Church and Edison Streets:
Stop not less than 10 feet nor more than 50 feet from crossing, then proceed (if no movement approaching on intersecting line). During fog, inclement weather or obscured visibility member of crew must flag through crossing after ascertaining there is no movement on conflicting route.

RULE 99-A. Lathrop: Third paragraph will not apply to crews of Nos. 53 and 54 and Trains 51 and 52 within interlocking limits or between interlocking zones.

RULE 103-A. Automatic crossing gates: Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against the current of traffic or movements from yard tracks over crossings, must know that gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
Tracy.....	Banta Road.....	73.6
Stockton.....	McKinley Ave.....	87.8
Stockton.....	Hazelton Ave.....	90.5
Stockton.....	Church Street.....	90.6
Stockton.....	Lafayette Street.....	90.7
Stockton.....	Market Street.....	90.9
Stockton.....	Main Street.....	90.95
Stockton.....	Weber Avenue.....	91.0

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew:

- Lodi.....Crossing Oak St. (D-103.25) and Pine St. (D-103.3) on yard tracks,
- Tomspur.....Crossing on Aaron Canning Co. spur, D-98.1,
- Woodbridge....Crossing Woodbridge road on General Mills spur, DE-105.3-C,
- Carbondale.....Crossing County road when on industry track, DG-132.1.

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

- Lodi.....Woodbridge Branch, for Lathrop line,
- Lodi.....Yard track for Kentucky House Branch.

RULE 104-A. Tracy:

Westward freight trains approaching east end Tracy Yard must run expecting to find main track switch lined for movement into yard tracks.

RULE 105. Lathrop: Westward siding extends from MP 82.44 to MP 81.61.

RULE 204. Trains of Lathrop or Merced Subdivision, with the same conductor and engineer operating through Lathrop may be issued train orders on one subdivision that affect their movement on the other, or both subdivisions.

RULE 221. Trains operating Clements and beyond on Kentucky House Branch must obtain clearance at Lodi OK'd by Chief Train Dispatcher.

RULE D-251. Will apply as follows:
On eastward track: Lathrop to MP 92.2.
On westward track: MP 92.2 to MP 81.24.

RULE 286. Trains or engines from Oakdale Branch must not pass Signal D-913 displaying yellow aspect without permission from yardmaster at Stockton. Cars or engines must not be left on approach circuit which extends 500 feet in advance of Signal D-913.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Absolute signals are listed as "P-A", "P-SA" or "P-I".

Eastward Signal	Protection	Westward Signal
P-710	Spring switch, junction to Los Banos line, Tracy.....	
	Spring switch to yard, Tracy.....	P-829
	Spring Switch to Freight Lead, MP 75.9.....	P-SA
	Spring switch, Stockton wye.....	P-I

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Tracy: Top unit of Signal P-710 governs movements toward Lathrop. Bottom unit governs movement toward Los Banos.

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located 185 feet east of MacArthur Blvd. to clear Signal 713 for movements to continue.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Top unit of Signal P-829 governs movements on main track. Bottom unit governs movements to yard.

Signals 716 and 723 on Track No. 1 at crossover near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rules 509 and 510 will govern.

Top unit of Signal 735 governs movements on main track. Bottom unit governs movements into yard over crossover.

Top unit of Signal 736 on Track No. 1 governs movements to the freight lead. The center unit governs movements to the main track. The bottom unit, when displaying a lunar light governs movements to the Freight Lead per Rule 289.

Eastward trains moving on main track must not pass Signal 734 and eastward trains entering main track through crossover MP 73.5 must not pass Signal 736 until signal govern-

ing movement displays proceed indication or permission obtained from signal operator Lathrop. When Signal 734 displays proceed indication, eastward trains on main track may proceed to Lathrop interlocking limits MP 75.81, and when Signal 736 displays proceed indication, eastward trains entering main track through crossover are authorized to enter main track and proceed to Lathrop interlocking limits MP 75.81, without timetable or train order authority and regardless of superiority of trains.

When westward P-SA Signal at MP 75.9 displays proceed indication, westward trains are authorized to proceed on main track to Signal 735, Tracy Yard, without timetable or train order authority and regardless of superiority of trains.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM—PUSH BUTTONS.

Tracy: Push buttons are located on Signal 827 on Los Banos line, and instrument case east of MacArthur Blvd. on Lathrop line to clear signals over junction switch.

Push buttons are located on instrument case opposite Signals 828 and 826, Los Banos line, west of spring switch to yard.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Tracy..... Junction switch MP-71.16 to Los Banos line.....	Lathrop Subdivision
Banta..... MP 75.9 Freight Lead to Main Track.....	Main Track

Spring switches not equipped with facing point locks are located as follows:

Location	Normal Position
Tracy..... MP-82.98 Los Banos Main to yard.....	Yard Track
*Stockton.... West Leg of Wye.....	West Leg of Wye

*Has ground throw switch stand below plate at switch. Not equipped with target bearing letters "SS".

RULE 605. INTERLOCKING

Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.64 on the Niles line and to eastward SA Signal at MP 82.18 on the Martinez line.

Interlocking portion of SA signals will be controlled by the Tracy telegraph operator.

Lathrop: Eastward 3-unit signal at west end of the west zone will govern movements as follows:

- Top unit to eastward main track Lathrop Subdivision;
- Center unit to Merced Subdivision;
- Bottom unit to westward main track against current of traffic.

Lathrop: East zone: Limits extend from SA signal 575 feet west of west switch of crossover to SA signal 65 feet east of east switch of crossover.

West zone: Limits extend from eastward interlocking signals MP 75.81 to westward interlocking signals east of junction switch MP 81.3.

Electric locks and dwarf interlocking signals at Best Fertilizer, MP 80.48 and West House Track at Lathrop MP 81.24 are controlled by Lathrop signal operator. Rule 765 will apply to use of these switches.

South zone: Limits extend from 225 feet west of junction switch to 65 feet east of junction switch.

WP zone: Limits extend between semi-automatic signals either side of WPRR crossing.

Telephones at interlocking signals governing entrance to East, West and South zones, in door of concrete shelter at WPRR crossing and Signal 734 at Banta.

Stockton: AT&SF Crossing Sacramento and Taylor Streets:

Limits of Stockton Tower No. 2 have been extended to include that portion of main track, siding, and crossovers on the AT&SF Railway to Commerce Street and signal indications will supersede the superiority of train in both directions on both tracks. The movement of trains and engines in this territory will be under the control of Stockton Tower No. 2, who may issued instructions as required and must be advised in advance of any known condition that will delay the train or engine or prevent it from making usual speed.

Speed limit between Stockton Tower No. 2 and Commerce Street is 20 MPH. Through turnouts and crossovers—12 MPH.

Following fixed signals and indications are effective in above specified territory:

RED.....Stop and communicate with Stockton Tower No. 2 for instructions.

FLASHING RED.....Proceed prepared to stop short of train, obstruction or switch not properly lined, but not exceeding 20 MPH.

RED OVER YELLOW..Same as flashing red.

S. P. movements entering AT&SF interlocking limits at Commerce Street may disregard the letter A on signal governing entrance thereto as it applies to WP movements only.

Following whistle signals will be observed at Stockton Tower No. 2:

From SP to AT&SF enroute Commerce Street...	o - o.
For Middle Track.....	o - -.
For Old Siding.....	- - o o.
For Westbound Main Track.....	o o - -.
For Eastbound Main Track.....	- o -.

Enginemen of eastward trains that are to make through movement without stopping at Stockton Yard will sound whistle signal --- 0 --- while approaching Signal 876 east of W. P. Railroad crossing French Camp.

Stockton: WPRR crossing Weber Avenue and Union St.: Signals governing movements over WPRR track at MP 91.00 are under control of WPRR train dispatcher. When signals governing movement over crossing display stop indication after approach circuit is occupied or if signal governing movements out of Building Materials Distributors spur does not display proceed indication after switch and derail have been lined, a member of crew must contact WPRR train dispatcher for permission and instructions to operate push button time release.

Eastward trains via Oakdale Branch must not leave yard until authorized by yardmaster or his representative.

Polk: West switch and eastward signals operated by signal operator at Elvas, and their use governed by Sacramento Division special instructions.

RULE 680. AUTOMATIC INTERLOCKING

French Camp, WPRR Crossing MP 87.85: Interlocking limits, interlocking signals 500 feet west of and 430 feet east of WP crossing on eastward main track. Interlocking signals 430 feet east of and 380 feet west of WP crossing on westward main track. Interlocking signals 240 feet west of and 210 feet east of WP crossing on the drill track.

RULE 760. CENTRALIZED TRAFFIC CONTROL

Limits extend from signals 650 feet west of WPRR crossing, MP 92.30 to interlocking signal just west of west switch at Polk.

On the double track between west limits of CTC and east end of Akers, movements may be made in either direction on either main track being governed by block signal indication and Rules 509 or 510 as applied to single track will apply to both tracks.

Movements across WPRR main track, MP 92.30, are under the control of SP train dispatcher at Oakland (16th St.) and movements over crossing will be made in accordance with applicable CTC rules.

When absolute signals governing movement over crossing display stop indication, a member of crew must contact train dispatcher by telephone for instructions.

Crossover switches are dual control switches and when necessary to hand throw these switches, Rules 771 and 772 will apply.

GENERAL REGULATIONS

RULE 825. Tracy: All freight trains entering Tracy Yard will tie no less than three hand brakes on the east end unless instructed otherwise by Yardmaster.

Train crews must not release brakes on outbound trains until engine is coupled and brake pipe charged.

RULE 827. Tracy: Passenger trains except No. 51 and 52 and trains consisting entirely of passenger equipment must approach Tracy at speed not exceeding 8 MPH to allow forward brakeman to detrain on station side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

Lathrop: Train No. 51 will be governed by the following: After stopping at Lathrop, forward brakeman will detrain and walk around entire train, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

Train No. 52 will be governed by the following:

Approach Lathrop at speed not exceeding 8 MPH to allow forward brakeman to detrain on engineer's side, where rear of train will stop. He will make rolling inspection of train, then walk length of train on opposite side, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830.

Tracy: Trains 51, 52, 53 and 54 will make station stop at station (Lathrop Line), clearing MacArthur Boulevard.

Trains 57 and 58 will make station stop at Station (Los Banos Line).

Lodi: Through freight trains picking-up or setting out will be governed as follows:

Westward trains must stop at Hill Signal east of yard and detach engine.

Eastward trains when consist does not exceed 75 cars will stop to clear Tokay Street and detach engine. When consist exceeds 75 cars, train must stop west of west switch of siding and detach engine.

Trains with consist in excess of 75 cars and using controlled siding must arrange to immediately cut street crossings.

AIR BRAKE RULES

RULE 17. Retaining valves must be used on freight and mixed trains without dynamic brakes in operation on descending grades as follows:

Toyon to ½ mile east of Valley Spring ... 1 retaining valve for every 75 tons in train.

MP 129 to Helisma ... 1 retaining valve for every 85 tons in train.

Freight and mixed trains with dynamic brakes in operation and handling over 800 tons must use retaining valves as follows:

Toyon to ½ mile east of Valley Springs ... 1 retaining valve for each 100 tons in train.

MP 129.00 to Helisma .1 retaining valve for each 125 tons in train.

FREIGHT TRAINS

RULE 22. Tracy: Trainmen must not couple air hose on outgoing trains at Tracy until train is made up and cabooses and road engine are on train. Coupling cabooses and road engine to train will be considered as an indication that the train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the cabooses and road engine have been attached, without instructions from the yardmaster, who will see to it that members of the crew are notified in advance.

RULE 25. Will apply at Toyon.

RULE 33. When gross tonnage of freight train handling cars with single capacity brakes exceeds 80 tons per operative brake, maximum speed of train must not exceed 45 MPH, except when gross tonnage exceeds 85 tons per operative brake, maximum speed must not exceed 25 MPH on descending grades of 1.2% to 1.5% and 20 MPH on descending grades in excess of 1.5%. Grades where such restrictions apply will be:

KENTUCKY HOUSE BRANCH

Maximum speed of freight trains must not exceed 20 MPH on descending grades when gross tonnage exceeds 85 tons per operative brake.

<u>Eastward</u>	<u>Westward</u>
MP 135.0 to MP 137.5	MP 120.0 to MP 135.0
	MP 137.5 to MP 142.84

MISCELLANEOUS

11. Load limit (car and contents):

- **Tracy-Polk.....263,000 pounds
- Stockton-Montpellier.....240,000 pounds
- Woodbridge-Kentucky House.....240,000 pounds
- *Galt-Ione.....240,000 pounds

*When notified that false bents are not in place on bridges 135.87 and 136.64, load limit between Edwin and Ione will be 169,000 pounds, except that passenger equipment on six axles weighing not over 200,000 pounds may be handled.

**Cars SP 463000 through 463499, maximum gross load per car is 260,000 pounds when operated in series.

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

13. LOCATION OF STOCK YARDS

Station	Capacity in cars
Elk Grove.....	9 (Water)
Peters.....	12 (Water)
Adela.....	15 (Water)
Oakdale.....	16 (Water)
Claribel.....	18 (Water)
Clay.....	8
Clements.....	10

30.

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

Mile Post	At or Near	Description
104.3	Lodi.....	Mokelumne River bridge.....Side
136.7	Dagon.....	Sutter Creek bridge....Overhead & side

(Faint mirrored text from the reverse side of the page, including "SPEED RESTRICTIONS FOR OTHER TRAIL MAIN BRANCH" and "SPEED RESTRICTIONS FOR LATHROP SUBDIVISION")

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on pages 5 and 6 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, and **OTHER MAXIMUM SPEEDS** appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

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

TERRITORY			PASSEN-GER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			PASSEN-GER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	3	MP	MP	Column:	1	2	3
EASTWARD, TRACY TO POLK:						WESTWARD, POLK TO TRACY:					
71.16 to 72.25			35	35	35	132.00 to 104.40			70	60	70
72.25 to 81.39			79	60	70	104.40 to 103.65			70	55	70
Thru switches to Fresno Line, West Zone at Lathrop						103.65 to 102.00					
81.39 to 89.65			25	25	25	102.00 to 91.40			30	30	30
89.65 to 90.40			70	60	70	*91.40 to 90.40 (Stockton)			70	60	70
*90.40 to 91.40 (Stockton)			70	45	70	90.40 to 81.39			20	20	20
91.40 to 94.25			20	20	20	Thru switches to Fresno line, East Zone at Lathrop					
94.25 to 95.00			70	60	70				25	25	25
95.00 to 95.01 (thru turnout)			70	50	70	81.39 to 72.25			79	60	70
95.01 to 101.25			25	25	25	72.25 to 71.16			35	35	35
101.25 to 102.00			70	60	70	EASTWARD, STOCKTON TO MONTPELLIER:					
102.00 to 103.65			70	55	70	*90.95 to 93.10 (Stockton)					
103.65 to 132.00			30	30	30	93.10 to 122.20				30	30
			70	60	70	122.20 to 140.29				10	10
						122.20 to 93.10					
						*93.10 to 90.95 (Stockton)					
						WESTWARD, MONTPELLIER TO STOCKTON:					
						140.29 to 122.30					
						122.30 to 122.20					
						122.20 to 93.10					
						*93.10 to 90.95 (Stockton)					
EASTWARD, LODI TO KENTUCKY HOUSE:						WESTWARD, KENTUCKY HOUSE TO LODI:					
103.51 to 121.40				30	30	142.84 to 139.70				25	25
121.40 to 132.30				25	25	139.70 to 132.30				15	15
132.30 to 139.70				15	15	132.30 to 121.40				25	25
139.70 to 142.84				25	25	121.40 to 103.51				30	30
EASTWARD, LODI TO WOODBRIDGE:						WESTWARD, WOODBRIDGE TO LODI:					
				25	25					25	25
EASTWARD, GALT TO IONE:						WESTWARD, IONE TO GALT:					
112.12 to 122.40				49	49	*138.99 to 122.40, except				30	30
*122.40 to 138.99, except				30	30	Over structures No. 136.64 and 135.87				20	20
Over structures No. 135.87 and 136.64				20	20	122.40 and 112.12				49	49

*Regulated by City ordinance.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

On Oakdale Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in Speed Restrictions for Trains table above.

MP 90.96 and MP 125.60	
DF 12, 15, 608, 609	25 MPH
DF 4, 10, 11, 13, 14, 600 to 607, 610 to 617, 620	30 MPH
DF 3, 9	35 MPH
MP 125.60 and MP 140.28	
DF 12, 15, 608, 609	25 MPH

On Kentucky House Branch between MP 130.20 and MP 136.90 maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in Speed Restrictions for Trains table above.

DF 12, 15, 608, 609	15 MPH
DF 4, 10, 11, 13, 14, 600 to 604, 606, 617, 620	20 MPH

SPEED RESTRICTIONS FOR IONE BRANCH..... See Page 31
SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS..... See Page 31

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Tracy and Polk	Stockton to Montpellier	Montpellier to Stockton	Lead to Wallace Toyon to MP 139.0	Wallace to Toyon MP 139.0 to Kentucky House	MP 139.0 to Toyon	Valley Spring to MP 129
DP-4, 7, 12	6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917.....	3400	....	....	....	....	....	....
DP-5, 6, 8 to 11	6005 to 6016, 6055 to 6058, 5910 to 5915.....	3425	....	....	....	....	....	....
DP-13	6019 to 6033, 5918 to 5924..... 6034 to 6045..... 6067 to 6068.....	....	....	....	....	....	....	....
DF-1 to 12	6138 to 6461, 8022 to 8303, except..... with 61:16 gear ratio..... with 60:17 gear ratio.....	3750 3000	....	....	....	....	....	....
DF-100	5200 to 5202.....	5000	3700	5000	3900	1000	1650	2600
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278.....	5000	4000	5000	4200	1225	1800	2825
DF-109, 111	4903 to 4905, 5250 to 5252.....	5000	4000	5000	4200	1225	1800	2825
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493.....	6500	4375	6000	....	....	....	....
DF-115, 119, 123, 126	5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507.....	7300	5025	6775	....	....	....	....
DF-200 to 206	5100 to 5120.....	2000	....	....	1475	400	575	975
DF-300 to 304	4600 to 4623, 4700 to 4703.....	3250	2250	3025	....	....	....	....
DF-305, 306	4624 to 4633.....	3600	....	....	....	....	....	....
DF-307	4634 to 4645.....	....	....	....	....	....	....	....
DF-500, 501	4800 to 4815.....	....	....	....	....	....	....	....
DF-502	4816 to 4818.....	5900	....	....	....	....	....	....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895.....	3950	....	....	....	....	....	....
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871.....	4050	2850	3800	3000	775	1300	2000
DF-800	9001 to 9003.....	7625	....	....	....	....	....	....
DS-1 to 8	1000 to 1032.....	1625	1350	1850	1150	300	450	775
DS-9 to 12	1033 to 1090.....	....	....	....	....	....	....	....
DS-100 to 109, 111, 115 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567.....	2450	2125	2850	2250	550	950	1450
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550.....	3200	....	....	2275	550	950	1475
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596.....	....	....	....	....	....	....	....
DS-200, 201	1900 to 1903.....	7700	....	....	....	....	....	....
DF-127	7000 to 7020.....	7700	....	....	....	....	....	....

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

On Ione Branch between locations shown below maximum speed must not be exceeded when handled by following engines subject to further restrictions shown in SPEED RESTRICTIONS FOR TRAINS TABLE above:

	MP 122.13 to MP 122.40
DF 12, 15, 608, 609.....	30 MPH
DF 606, 617, 620.....	35 MPH
DF 4, 10, 11, 13, 14, 600 to 605, 607, 610 to 616.....	40 MPH
DF 1, 2, 3, 5, 8, 9.....	45 MPH
	MP 136.10 to MP 139.0
DF 12, 15, 608, 609.....	25 MPH

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches.....	10
Through turnouts on other than sidings.....	10
On branches.....	10
★On all yard tracks within city limits, Stockton	12
Through controlled sidings in CTC, except:.....	30

★Regulated by City ordinance.

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Kentucky House to MP 138.0 Troyon to Valley Spring MP 128 to Lodi	Lodi and Woodbridge	Gait to Edwin	Edwin to Ione	Ione to Edwin	Edwin to Gait
DF-100	5200 to 5202.....	.....	.....	.....	.....	.....	.....
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278.....	5000	4100	2350	①5000	①5000	5000
DF-109, 111	4903 to 4905, 5250 to 5252.....	.....	.....	.....	.....	.....	.....
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493.....	10000	4625	2450	①5300	①10000	10000
DF-115, 119, 123, 126	5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507.....	10000	5175	.....	.....	.....	.....
DF-200 to 206	5100 to 5120.....	3000	1450	825	1750	3000	3000
DF-300 to 304	4600 to 4623, 4700 to 4703.....	4000	2300	1300	①2850	①4000	4000
DF-305, 306	4624 to 4633.....	.....	.....	.....	.....	.....	.....
DF-307	4634 to 4645.....	.....	.....	.....	.....	.....	.....
DF-500, 501	4800 to 4815.....	.....	.....	.....	.....	.....	.....
DF-502	4816 to 4818.....	.....	.....	.....	.....	.....	.....
DF-602, 603, 605 to 607, 611, 612, 616	5600 to 5719, 5730 to 5844, 5872 to 5895.....	.....	.....	1700	①3450	①10000	10000
DF-608 to 610, 613, 614, 615	5720 to 5729, 5845 to 5871.....	10000	2925	1750	①3550	①10000	10000
DS-1 to 8	1000 to 1032.....	4000	1100	775	①1725	①4000	4000
DS-9 to 12	1033 to 1090.....	.....	.....	.....	.....	.....	.....
DS-100 to 109, 111, 115 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567.....	4000	.....	1250	①1250	①4000	4000
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550.....	4000	.....	1675	①1675	①4000	4000
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596.....	.....	.....	.....	.....	.....	.....
DS-200, 201	1900 to 1903.....	.....	.....	.....	.....	.....	.....

①Not permitted to operate between Edwin and Ione when notified false bents are not in place on bridges 135.87 and 136.64.

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

RULE 82-A. Second-class trains and sections thereof, authorized on Western Division (Merced Sub-division) from Lathrop, may display indicators and signals, if any, as such schedule or section on Sacramento Division Roseville or Antelope to Polk and on Lathrop Sub-division Polk to Lathrop, operate as authorized by Rules D-97-A and D-251 Roseville or Antelope to Polk and Polk to Lathrop and register accordingly at Stockton.

Schedules and sections of schedules from Lathrop Sub-division to Merced Sub-division receiving clearance at Stockton endorsed "green signals" or "no signals" authorizes movement on Merced Sub-division. Trains will assume the corresponding number and schedule at Lathrop, display indicators and signals accordingly and may leave Lathrop without clearance.

Extra trains authorized at Stockton for movement on Merced Sub-division may leave Lathrop without clearance.

Regular trains from Merced Sub-division to Lathrop Sub-division may assume the corresponding number and schedule at Lathrop without clearance.

Second-class trains and sections thereof, authorized on Western Division (Merced Sub-division) to Lathrop and moving between Lathrop and Roseville, may display the same indicators and signals, if any, on Lathrop Sub-division Lathrop to Polk and on Sacramento Division Polk to Roseville, operate as authorized by Rules D-97-A and D-251 Lathrop to Polk and Polk to Roseville and register accordingly at Stockton and Roseville.

Crew ordered for No. 51 may assume schedule at Fresno without clearance.

Westward trains originating at Fresno Yard will obtain train orders, register and check register at Muscatel instead of Fresno Yard.

RULE 83. Sections of schedules authorized at Stockton for movement on Merced Sub-division need not ascertain that preceding sections of the same schedule have left Lathrop. A leading section must not permit a following section to pass between Stockton train-order office and junction switch Lathrop except as provided by last paragraph of Rule 85.

Identification may be made by westward trains between Stockton and Lathrop to be applied at Lathrop on Merced Sub-division; and by westward trains between Fresno and Fresno Yard to be applied at end of double track Fresno Yard. Reduce speed sufficiently to permit identification and comply with Rule 14(k).

RULE 83-A. Only trains originating or terminating will register at Modesto, Turlock and Merced.

Only trains terminating will register at Fresno Yard.

Trains originating or terminating on east leg of wye at Lathrop will not register at Lathrop.

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

- Lathrop.....Merced Sub-division trains originating or terminating on west leg of wye.
- Muscatel....All Trains.

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

West MP		East MP
80.56	Lathrop (Tracy-Stockton line).....	83.04
	" (Merced line).....	94.29
109.94	Modesto.....	114.93
124.98	Turlock.....	127.32
149.40	Merced.....	152.50
167.75	Chowchilla.....	169.02
182.67	Madera.....	187.00
206.04	Fresno (Pratton-Tulare line).....	210.79
End of track	" (Biola-Porterville line).....	208.15
199.07	" (Merced-Clovis line).....	209.60

Fresno: When making movements against current of traffic, trains or engines must be preceded by flagman over railway and street crossings at grade where wigwags installed, protecting crossings during movement, except where crossing watchman located.

Eastward first-class trains, after passing Signal 2052 (west of Tuolumne St.), must proceed with caution and be prepared to cross to westward main track on signal from yardman.

When Signal 2046 on Pratton line, or Signal 2042 on eastward track displays stop indication train must stop, and after proceed signal received from yardman (green flag by day, green light by night) may then proceed as prescribed by Rules 509 and 513.

Eastward trains via Pratton line to Fresno Yard must receive proceed signal from yardman (green flag by day, green light by night) before fouling eastward or westward main track.

Fresno Yard: Trains entering or leaving yard tracks must receive proceed signal from yardman (green flag by day, green light by night), except within limits of diverging route signals.

RULE 103-A. Automatic crossing gates:

Following crossings protected by gates, with control circuits located within short distance of crossings.

Crews of trains or engines making stop, reverse movements, movements against current of traffic or movements from yard tracks over crossings, must know that gates are down and crossings clear of vehicular traffic before entering crossings.

Station	Location	MP
Manteca.....	Yosemite Street.....	96.70
*Merced.....	"J" Street.....	150.80
Biola Junction.....	Shaw Ave.....	198.50

*Does not operate for movements from Poultry Producer's spur and Rule 103-A will apply.

Turlock: Switching must not be done over Main and Olive Street crossings between hours of 12 Noon and 1:00 PM.

Madera: Automatic warning devices at Yosemite Ave. and Sixth St., do not apply to back track which serves Valley Feed & Fuel Co.

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and traffic on the highway protected by a member of the crew:

- Salida.....Broadway St. crossing for any movement that does not operate wigwag, B-106.4,
- Modesto....Tully Ave., on Grange Co. spur, B-112.25-C,
- Modesto....B St. on Shoemaker spur, B-113.55-C,
- Chowchilla...Highway crossing and Robertson St., on Standard Oil Co. spur, B-168.11-C,

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

- Fresno Yard..End double track, for westward track,
- Fresno.....Pratton line, for eastward main track.

RULE 105. Calla: No. 1 siding extends from MP 96.73 to MP 98.19 for use by westward trains only. No. 2 siding extends from MP 98.28 to MP 99.44 for use by eastward trains only. Connection between No. 1 and No. 2 siding must be left clear.

West Modesto: Siding extends from MP 110.33 to MP 111.34.

Modesto: Siding extends from MP 112.78 to MP 113.68.

Siding at Modesto for use only by first-class trains, light engines and local freight trains. May be used by other trains only when instructed by train dispatcher. Freight trains occupying this siding must not block street or highway crossings.

RULE 204. Trains of Lathrop or Merced Subdivision, with the same conductor and engineer operating through Lathrop may be issued train orders on one subdivision that affect their movement on the other, or both subdivisions.

RULE 221. Unit for display of flashing light installed at following stations:

Station	Location	Direction
Modesto.....	On Signal 1137.....	Westward

Displaying of flashing white light indicates that train-order signal is displaying proceed indication or that train-order operator has train orders ready for delivery, that such train orders do not restrict train at that station, and that train, provided it is not restricted by timetable or by train orders previously received, may pass fouling point of switch at which an opposing train may enter siding or place where time applies if there is no siding.

RULE 221. Muscatel is train-order office only for westward trains; portable train-order delivery post has been installed between main track and lead track. Fresno is train-order office only between 11:00 P.M. and 8:00 A.M. daily.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Absolute and interlocking signals are listed as P-A, P-SA or P-1:

Eastward Signal	Protection	Westward Signal
P-1972.....	Spring Switch Freight Lead MP 197.19.....	
	Spring Switch, Crossover Biola Jct.....	P-1

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM—PUSH BUTTONS

MP 197.19 west end Freight Lead. Push buttons are located on instrument case opposite Signals 1971 and 1973. Approach circuit sign is 500 feet east of Signal 1973 on Freight Lead.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
MP 197.19.....	Freight Lead-Biola Jct..... Main Track

Spring switches not equipped with facing point lock:

Location	Normal Position
Biola Jct.....	East Switch of Crossover west end No. 1 Drill Track..... Freight Lead

RULE 605. INTERLOCKING

Lathrop: East zone: Limits extend from 575 feet west of west switch of crossover to 65 feet east of east switch of crossover.

West zone: Limits extend from eastward interlocking Signal MP 75.81 to westward interlocking Signals east of junction switch MP 81.3.

Electric locks and dwarf interlocking Signals at Best Fertilizer, MP 80.48 and west end house track, MP 81.24 are controlled by Lathrop Signal Operator, Rule 765 will apply to use of these switches.

South zone: Limits extend from 225 feet west of junction switch to 65 feet east of junction switch.

WP zone: Limits extend between semi-automatic signals either side of WPRR crossing.

Telephones at interlocking signals governing entrance to East, West, and South zones, and in door of concrete shelter at WPRR crossing.

Biola Jct.: Limits extend on Merced line from 675 feet west of junction switch, and on Biola Branch from 575 feet west of junction switch, to 930 feet east of junction switch on Merced line, and on No. 1 drill track from eastward interlocking signal opposite junction switch to westward two unit P-Interlocking Signal 290 feet east of junction switch.

Trains and engines stopped by signals will call signal operator at train-order office Muscatel by telephone and be governed by his instructions. Telephones and instructions for hand operation of dual control switches are located in battery house at junction switch and at derail on Biola Branch.

Crossover east of Biola Jct. switch has dual control switch on Main track end, spring switch on Drill track end. Crews making movement from Drill track to Main track will secure permission from Signal Operator at Muscatel to hand throw spring switch and be governed by his instructions.

Two unit signal on No. 1 drill track. Top unit governs movement to Freight Lead; bottom unit all other movements.

RULE 680. AUTOMATIC INTERLOCKING

Modesto Tower: TSry crossing, MP 114.70: Limits extend between interlocking signals in advance of both sides of crossing.

GENERAL REGULATIONS

RULE 825. Madera: Eastward through freight trains when stopping to set out, leave train clear of first crossing west of west switch and westward freight trains clear east siding switch.

RULE 827. Lathrop: Train No. 51 will be governed by the following: After stopping at Lathrop, forward brakeman will detrain and walk around entire train, making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 830. Turlock: City ordinance requires that in event of fire alarm being sounded any train blocking Main St. must clear crossing immediately.

MISCELLANEOUS

11. Load limit (car and contents):
Lathrop-Fresno.....251,000 pounds
Unless authorized by Superintendent, heavier loads must not be handled.

13. LOCATION OF STOCK YARDS

Station	Capacity in cars
Modesto.....	6 (Water)
Turlock.....	6 (Water)
Merced.....	16 (Water)
Chowchilla.....	5 (Water)
Madera.....	9 (Water)

SPECIAL INSTRUCTIONS—MERCED SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in **SPEED RESTRICTIONS FOR ENGINES** appearing on pages 5 and 6 and **MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT**, and **OTHER MAXIMUM SPEEDS** appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

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

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	3	MP	MP	Column:	1	2	3
EASTWARD, LATHROP TO FRESNO:						WESTWARD, FRESNO TO LATHROP:					
Thru switches, East and West Zones, at Lathrop.....						★205.50 to 204.50.....					
On East leg of wye, Lathrop.....						204.50 to 199.28.....					
92.83 to 93.07 (switches).....						199.28 to 184.75.....					
93.07 to 94.00.....						184.75 to 183.16.....					
94.00 to 112.60.....						183.16 to 151.60.....					
112.60 to 114.00.....						151.60 to 149.70.....					
114.00 to 125.25.....						149.70 to 127.05.....					
125.25 to 126.00.....						127.05 to 126.30.....					
★126.00 to 126.30 (Turlock).....						★126.30 to 126.00 (Turlock).....					
126.30 to 149.70.....						126.00 to 114.00.....					
149.70 to 151.60.....						114.00 to 112.60.....					
151.60 to 183.16.....						112.60 to 94.75.....					
183.16 to 184.75.....						94.75 to 94.00.....					
184.75 to 199.28.....						94.00 to 93.07.....					
199.28 to 201.89.....						93.07 to 92.83 (switches).....					
201.89 to 201.93 (thru turnout).....						East leg wye, Lathrop.....					
201.93 to 203.75.....						Thru switches, East and West Zones at Lathrop.....					
203.75 to 204.50.....						25					
★204.50 to 205.50.....						25					
EASTWARD, BIOLA TO BIOLA JCT.:						WESTWARD, BIOLA JCT. TO BIOLA:					
199.93 to 208.62.....						208.62 to 199.93.....					
40						40					

★Regulated by City ordinance.

Freight and mixed trains containing no restricted cars are authorized to operate at Column 1 speeds not exceeding 60 MPH (65 MPH when specifically authorized) consistent with local restrictions account grade and other conditions, provided trains:

1. Do not exceed 120 cars and 40 tons per operative brake; or,
2. When carrying 90 lbs. brake pipe pressure, do not exceed:

Number of Cars	Tons Per Operative Brake
70	60
75	59
80	58
85	57
90	56
95	55
100	54
105	53
110	52
115	51
120	50

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

With Caution
Not Exceeding
MPH

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches.....	10
Through turnouts on other than sidings.....	10
On branches.....	10
On Spreckels Sugar spur, Manteca.....	10
On Winery spur, Madera.....	25
Freight Lead, Biola Junction.....	30

SPECIAL INSTRUCTIONS—MERCED SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Lathrop and Fresno	Biola, Jet and Biola
DP-4, 7, 12 DP-5, 6, 8 to 11 DP-13	{ 6000 to 6004, 6017, 6018, 6046 to 6054, 5900 to 5909, 5916, 5917..... 6005 to 6016, 6055 to 6058, 5910 to 5915.... } { 6019 to 6033, 5918 to 5924..... } { 6034 to 6045..... } { 6067 to 6068..... }	3400 3425....	............
DF-1 to 12 DF-100 DF-101 to 108, 110, 112 DF-109, 111 DF-114, 116 to 118, 120 } to 122, 124, 125 } DF-115, 119, 123, 126 DF-200 to 206 DF-300 to 304 DF-305, 306 DF-307 DF-500, 501 DF-502 DF-602, 603, 605 to 607, } 611, 612, 616 } DF-608 to 610, 613, 614, } 615 } DF-800	{ 6138 to 6461, 8022 to 8303, except..... with 61:16 gear ratio..... with 60:17 gear ratio..... } { 5200 to 5202..... } { 4900 to 4902, 5203 to 5249, 5253 to 5278.... } { 4903 to 4905, 5250 to 5252..... } { 5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493..... } { 5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507..... } { 5100 to 5120..... } { 4600 to 4623, 4700 to 4703..... } { 4624 to 4633..... } { 4634 to 4645..... } { 4800 to 4815..... } { 4816 to 4818..... } { 5600 to 5719, 5730 to 5844, 5872 to 5895.... } { 5720 to 5729, 5845 to 5871..... } { 9001 to 9003..... }	3750 3000 5000 5000 6500 7300 2000 3250 3600 5900 3950 4050 7625	.... .... .... 5000 5000 6500 2000 3250 3600 5900 3950 4050
DS-1 to 8 DS-9 to 12 DS-100 to 109, 111, 115 } 119 } DS-110, 114, 118 DS-113, 117, 120 to 122 DS-200, 201 D-127	{ 1000 to 1032..... } { 1033 to 1090..... } { 1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567..... } { 1442 to 1463, 1492 to 1513, 1539 to 1550 } { 1486 to 1491, 1529 to 1538, 1568 to 1596.... } { 1900 to 1903..... } { 7000 to 7020..... }	.... .... .... .... .... .... 7700	1635 2450 3200

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