

**Spokane, Portland & Seattle Railway Co.**  
**Oregon Trunk Railway**  
**Oregon Electric Railway**  
**United Railways Co.**  
**Gales Creek & Wilson River R. R. Co.**

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# **Special Instructions No. 2**

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**In Effect 12:01 A. M. Pacific Time**

**Sunday, August 27, 1939**

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**These instructions govern Current Time Table.  
Read carefully and be positive that you have  
the Current Time Table, also copy of Current  
Special Instructions.**

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**M. C. LA BERTH, *Superintendent***

Original pages 2, 29-32  
are blank.

## Special Instructions

### TERMINALS SUB-DIVISION

1. Rule (D97) is in effect on this Sub-division.
2. All transfers operating between Lake Yard and Portland, in either direction, without cabooses, between sunset and sunrise, or when weather conditions obscure vision, will display red lantern on rear end of the end car in transfer.
3. **At Portland**—Between end of double track at 10th Avenue and Union Depot, trains will be handled by switch tenders and westward trains must not pass clearance point at end of double track until proceed signal from switch tender is received.  
Eastward trains from S.P.&S. Ry. yard will use westward main track against current of traffic from 15th Avenue to 17th Avenue under protection of flagman, thence through cross-over to eastward main track. 17th Avenue cross-over is not protected by automatic signal. Switches at both ends of 15th Avenue connection must be kept set and locked for westward main track.  
Trains from S.P.&S. Ry. yards running against current of traffic to the 17th Avenue cross-over must not send trainmen to 17th Avenue to line switches and hold opposing trains until their train is actually ready to move.  
Trains from S.P.&S. Ry. yards must not occupy westward main track while waiting for outbound passenger trains on the eastward main track to pass. Trainmen sent to 17th Avenue to line switches after train is ready to depart, will open both cross-over switches so that outbound trains may cross over into the current of traffic without delay.  
S.P.&S.Ry. yard crews and engines in charge of hostlers will not enter upon the track of the Northern Pacific Terminal Company in the vicinity of the S.P.&S.Ry. engine terminal without first getting a signal from the N.P.T.Co. switch tender, and in no case will S.P.&S.Ry. employes handle the switch to the connection between the S.P.&S.Ry. and the N.P.T.Co. unless the switch tender should be absent, and then only when it can be plainly seen that there are no N.P.T.Co. engines or trains moving in the vicinity of the connecting track switch.  
All freight trains entering S.P.&S. Ry. yard, except No. 803 (G.N. 672 and those trains with 01, 03, and G.N. 01 class engines), will, unless specifically advised to the contrary, head in on the 21st Avenue lead, stop north of 14th Avenue and call for track. Trains handling passenger equipment only will head in 14th Avenue and call for track.  
Yard crews when switching over the Southern Pacific Co. track at East First and Main Streets, Portland, must before leaving the crossing, assure themselves that signals have cleared for the Southern Pacific Co. tracks so that the S.P. Co. trains will not be delayed due to failure of these signals to clear.  
Employes handling the switch lock lever must be positive that it is in proper position when they have completed their work in that vicinity. When the lever is placed in normal position and door of the box closed, the signals on the S.P. Co. will clear. If for any reason, after lever has been restored to normal position the signals on the S.P. Co. tracks fail to clear, the train dispatcher must be notified immediately.
4. **The Movement of Trains Over Street Crossings**—within Corporate limits of a City where the City has installed electric traffic signals will be governed by the indication of the traffic signals during the period when such signals are in operation.  
At street intersections within the Corporate limits of a City where "Stop" Signs are displayed for the protection of traffic on through streets, trains and yard engines must come to a stop at such signs and then proceed over intersection at restrictive speed, bearing in mind that the Oregon State law provides that any and all vehicles on the right have the right of way.
5. **Engine Restrictions**—At Portland, 01, 03, and G.N. 01 class engines must not be operated over 21st Avenue lead.  
Yard engines only will be permitted to use the old main line between the cross-over east of 14th Avenue to the west switch of the 14th Avenue cross-over. All other engines will use the cross-over between the old main line and middle yard lead, just south of 14th Avenue.  
Engines working on loading tracks of the oil plants, Willbridge, must, under no circumstances, permit the engines to pass engine stop signs. Sanding out of engines between Nicolai Street, Portland and Lake Yard is prohibited.
6. **Impaired Clearance**—Trolley wire in the 30 and 40 yards at Portland will not clear a man on top of high cars.  
All tracks in S.P.&S.Ry. yards, Portland, have impaired clearance and will not clear a man on side of car.  
Sign reading "Impaired Clearance" placed upon switch stand at entrance of spur or siding indicates there are platforms or structures located along

**6. Impaired Clearance—Continued—**

the side of same, which do not provide minimum horizontal clearance prescribed by Public Utilities Commissioner of Oregon. Employees will use care and avoid risk of injury while working on spurs or sidings protected with "Impaired Clearance" sign.

**7. Derails—**

- Portland—W. P. Fuller & Company spur.
- Willbridge—Union Oil Co. lead.
- Standard Oil Co. track No. 1.
- Bethlehem Steel Co. spur.

**8. Speed Restrictions—**

Between Lake Yard and 17th Avenue, 20 miles per hour.  
Between 17th Avenue and umbrella sheds Union Station, 10 miles per hour.  
Umbrella sheds to Union Station stop, 6 miles per hour.  
Over bridges between Vancouver and Willbridge, 30 miles per hour.  
Over draw spans and rail locks at ends thereof, 10 miles per hour.

**9. Automatic Block District—**Between MP 2.0 and MP 10. Both tracks.

## VANCOUVER DIVISION FIRST SUB-DIVISION

**1. Speed Restrictions—**

	Pass.	Frt.
Maximum Speed.....	60	40
Over 8th St. Crossing, Vancouver.....	8	8
Through Camas (City Ordinance).....	20	20
To exchange U. S. mail, Trains 1 and 2.....	12	..
Between first crossing east of depot and overhead bridge west of depot, Washougal (City Ordinance).....	15	15
Trains with engines of E1 and Z6 class, between east end Columbia River bridge, Vancouver and MP 44.01 (1.1 miles east from east switch, Skamania).....	45	40
and between MP 44.01 and Wishram.....	55	40

**2. Commercial Tracks not shown as Stations—**

	Miles from Portland	Car Capacity	Switch at	Station Number
Ellsworth.....	16.5	12	Both ends	17
Camas Lumber Co....	25.1	3	East end	25
Std. Oil Co., and United Gas Corp....	25.5	10	East end	26

**3. Derails—**

- Camas —West end house track.  
East end converting spur.  
On "New spur" to paper mill leading from house track back of depot and located 500 feet from house track switch to protect cars on chlorine spot.
- Washougal —West end house track.
- Stevenson —Lindis spur—derail located 705 feet from switch off house track.
- Lyle —West end Union Meat Co. spur.  
East end outfit spur.

**4. Impaired Clearance—**

Army building located parallel with the end of reservation spur Vancouver barracks; all concerned will use extreme care working in this vicinity.

**5. Automatic Block District and Signal Location—**

	East Signal	West Signal
Between MP 33.9 and MP 35.6 (Tunnel 1)	MP 33.9	MP 35.6
MP 67.4 and MP 70.3 (Tunnels 2 to 6)	MP 67.4	MP 70.3
MP 81.3 and MP 83.8 (Tunnels 7 to 10)	MP 81.3	MP 83.8

A signal connected fence is erected on either side of Tunnel 6 for purpose of giving signal warning of slides or other obstructions.

Eastbound signal at MP 66.4 and auxiliary signal 68.4 operate in conjunction. Therefore if signal at MP 66.4 or MP 70.3 is found in "Red" or Stop position, Rule 509a governs, and the auxiliary signal 68.4 may be passed at restricted speed.

Caution position of signal at MP 66.4 indicates that auxiliary signal 68.4 is in a Stop position, in which case Rule 509 (b) governs.

## SECOND SUB-DIVISION

**1. Speed Restrictions—**

	Pass.	Frt.
Maximum Speed.....	60	40
All trains must enter passenger yards, Pasco, at restricted speed.		
Trains with engines of E1 and Z6 class:		
Between		
MP 105.7 and MP 107.....	45	40
MP 107 and MP 113.....	55	40
MP 113 and MP 133.8.....	60	40
MP 133.8 and S.P.&S. Jct.....	45	40

**2. Engine Restrictions—**At Pasco, enginemen handling S.P.&S. Ry. engines 500 to 507, inclusive, while heading into turn-outs in train yard, will close throttle and not work steam until pony truck of engine has passed over frog.**3. Derails—**

- Sundale —east end of house track.
- Plymouth —both ends of industry track.
- Hover —east end of industry track.
- Kennewick—east end of industry track.

**4. Automatic Block District and Signal Locations—**

	East Signal	West Signal
Between MP 193.5 and MP 195.5	MP 193.5	MP 195.5

## THIRD SUB-DIVISION

**1. Block Card Form 1226** will govern the movement of trains between Pasco and Ainsworth Junction. Trains must not move within these limits unless conductor and engineman each hold a card, properly filled out, numbered and completed and accompanied by Clearance Form A. (See rule on back of card, Form 1226.)  
If a westward train is to meet an opposing train at Ainsworth Junction, it must be brought to a stop before card is delivered.

**2. At Ainsworth Junction—**

Northern Pacific Ry. trains to 9th sub-division (Walla Walla Line), will call for the switch by sounding one long, 1 short, 1 long blast of the engine whistle.  
Normal position of switch is set and locked for S.P.&S. Ry. main track and during open office hours will be handled by the telegraph operator.

**3. Between Pasco and Ainsworth Jct.—**

All trains will be governed by S.P.&S. Ry. time table and rules.

**4. Between Ainsworth Jct. and Marshall Jct.—**

Northern Pacific Ry. trains using S.P.&S. Ry. track between Ainsworth Junction and Marshall Junction will be governed by S.P.&S. Ry., Vancouver Division, time table and rules.

**5. At Snake River Junction—**

Normal position of junction switch is set and locked for S.P.&S. Ry. 3rd sub-division. Trains from the Northern Pacific Ry. must not occupy S.P.&S. Ry. main track until after obtaining Register Check with clearance Form A from the operator at Snake River authorizing movement.

**6. At Scribner—**

Normal position of junction switch is set and locked for the line to Marshall Junction.

**7. At Marshall Junction—**

Junction switch is governed by the interlocking signal and rules.

**8. At Fort Wright—**

Junction switch is governed by the interlocking signal and rules.

**9. Helper District—**

Between Spokane and Mock.

**10. Engine Restrictions—**Enginemen handling S.P.&S. Ry. engines 500 to 507, inclusive, while heading into turn-outs in Pasco train yard and west end of old passing track leading from eastward main line at Maple Street, Spokane, will close throttle and not work steam until pony truck of engine has passed over frog.

**11. Speed Restrictions**

	Pass.	Frt.
Maximum Speed.....	60	40
Passing Snake River Gravel Pit.....	25	25
Between Kahlotus and Snake River Jct.....	40	25
Between South Cheney and Scribner.....	40	25
Trains with engines of E1 and Z6 class, maximum at any point.....	55	40

**12. Commercial Tracks Not Shown as Stations—**

	Miles from Portland	Car Capacity	Switch at	Station Number
Pasco Union Stock Yard Spur.....	233.2	34	West end	233
Burr Canyon Spur... Harder, Stockyard Siding.....	265.9	5	West end	266
Washtucna Ind's Spur Nemour's Powder Spur.....	280.7	18	Both ends	281
Washtucna Ind's Spur Nemour's Powder Spur.....	292.4	156	East end	292
Spur.....	368.6	48	West end	369
Brickyard Gulch Outfit Spur.....	374.6	9	East end	375

**13. Derails—**

Levey	—west end of spur.
Redd	—west end of spur.
Snake River	—west end of elevator spur.
Burr Canyon Spur	—west end.
Kahlotus	—east end of house track.
Harder	—west end of stockyard siding.
McAdam	—east end of spur.
Washtucna	{ —west end of house track. east end of empty coal track.
Hooper	—west end of industry track.
Lantz	—west end of industry track.
Lamont	{ —west end of westward passing track. west end of No. 2 track. east end of empty coal track. at top of heavy grade on oil spur.
Stoner	—west end of spur.
South Cheney	—east end of industry track.
Nemour	—2 derails (One 820 feet east of H.B. of spur.) (One 1600 feet east of H.B. of spur.)
Overlook	—east end of passing track.
Brick Yard Gulch Spur	—east end.

**14. Automatic Block District and Signal Location—**

Between	East Signal	West Signal
MP 271.2 and MP 272.5 (Tunnel 16)	MP 271.2	MP 272.5
MP 275.5 and MP 276.9 (Tunnel 17)	MP 275.5	MP 276.9
MP 358.6 and MP 360.0 (South Cheney)	MP 358.6	MP 360.0
MP 366.2 and MP 366.7 (Scribner)	MP 366.2	MP 366.7
MP 375.6 and MP 376.7 (Tunnel 19)	MP 375.6	MP 376.7

**FOURTH SUB-DIVISION  
(Goldendale-Lyle)**

**1. Speed Restrictions—**

	Pass.	Mixed
Between Goldendale and Klickitat.....	20	20
Between Klickitat and Lyle.....	25	25
On sharp curves.....	15	15
Klickitat, over road crossing about 500 feet east of depot..	5	5

**2. Commercial Tracks not Shown as Stations—**

	Miles from Lyle	Car Capacity	Switch at	Station Number
Doubling Spur.....	1.6	8	East end	G 2
Klickitat Springs....	15.8	10	East end	G 16

**3. Derails—**

Wahkiakus—west end of siding.

**OREGON TRUNK RAILWAY**

**1. At O. T. Junction—**Normal position of switch is set and locked for Oregon Trunk Ry.

**2. At Celilo Wye—**Normal position of switch is set and locked for Oregon Trunk Ry.

**3. Westward freight and mixed trains** will stop at Madras and turn up retainers and stop at South Junction and turn down retainers. Running brake tests will be made on westward trains at point one mile west of Madras.

**4. Speed Restrictions—**

	Pass.	Mixed
Over draw span Celilo bridge.....	25	25
Eastward trains from Union Pacific connection, Oregon Trunk Junction through spring switch.....	15	15

**4. Speed Restrictions—Continued—**

	Pass.	Frts. and Mixed
Between Wishram and MP 87.....	35	30
Between MP 87 and MP 98.....	25	20
Between MP 98 and Madras.....	35	30
Between Madras and Metolius.....	30	25
Between Metolius and Bend.....	45	40

Further speed reductions to be governed by restriction signs.

**5. Derails—**

Sherar	—west end passing track.
Maupin	—west end house track.
Gateway	—west end house track. —west end passing track.
Paxton	—west end.
Madras	—east end oil spur. —west end house track. —west end passing track.
Agency	—west end.
Metolius	—west end passing track.
Prineville Jct.	—west end.
Redmond	—east end house track. —west end house track.
Deschutes	—west end passing track.
Bend	—west end depot spur. —west end passing track. —west end house track. —east end Union Oil spur. —west end Standard Oil spur.

**6. Impaired Clearance—**

All trainmen and others interested are hereby warned that the majority of cattle guards on O. T. Ry. are closer to tracks than the required standard of the Public Utilities Commissioner of Oregon. Sign reading: "Impaired Clearance" placed upon switchstand at entrance of spur or siding, indicates there are platforms or structures located along side of same, which do not provide minimum horizontal clearance prescribed by Public Utilities Commissioner of Oregon. Employees will use care and avoid risk of injury while working on spurs or sidings protected with "Impaired Clearance" sign.

**7. Engine Restrictions—**

01, 03 and 06 class engines will be spaced not less than ten cars apart in trains. When these engines are moving light coupled together, they will be separated when passing over steel bridge No. T-105.6, four-tenths mile east of Madras and steel bridge No. T-88.6, 2.8 miles east of South Junction. All engines, except Z 6 class, being turned on wye at Bend will head around west leg of wye and back around east leg of wye. Z 6 class may be turned in either direction.

**8. Celilo Draw Bridge** is closed as a draw span except when actually in use to permit passage of navigation; stop signs have been removed and it will not be necessary for trains to stop except when flagged. When draw is to be opened, it will be protected in accordance with modified Rule 728, (Consolidated Code), contained in this book, by flagman fully equipped with flagging material in complete use in each direction from draw span. Government order permits closing of this draw requiring vessels desiring movement through bridge to notify Chief Dispatcher of S.P.&S. Railway at Portland, the time vessel desires passage through the draw; Chief Dispatcher will then instruct section foreman at Wishram to be on hand at Celilo draw at proper time, and after the flagmen have been placed in accordance with modified Rule 728 (Consolidated Code), contained in this book, and vessel is ready to pass through, will remove the angle bars which will allow the draw span to be opened. After vessel has passed through draw and the angle bars have been replaced, flagmen will be recalled and section foreman and flagmen released.

**ALL SUB-DIVISIONS,  
Including Oregon Trunk and Terminals**

1. Special instructions supersede rules and regulations of Transportation Department.
2. Yard men are prohibited from shoving cars on yard tracks without having a member of crew stationed on the leading car shoved, or at the extreme end of track being used, and the remainder of crew in such position as will enable signals to be passed to enginemen in ample time to prevent cars being shoved over end of track, or fouling other tracks, or causing damage to bumper or equipment. Conductors and engine foreman will be held personally responsible in every case where cars are shoved foul or over end of track or equipment damaged as result of violation of these instructions.

3. When passenger trains meet at stations where view is not clear, and track straight for at least one-half mile ahead, train holding the main track must stand one thousand (1000) feet from the switch to be used by opposing train, until such train has arrived.
4. Before coupling to or moving occupied outfit cars, trainmen must notify occupants, and see that all ladders and other obstacles are cleared.
5. Transportation Rule 2 (Consolidated Code), and Maintenance of Way rules require the following officers and employes who must use watches that have been examined and certified to by designated inspectors: All Division Officers, Track Inspectors, Section Foremen, Bridge and Building Foremen, Electrical Department Line Foremen, and Telegraph Line Foremen and Linemen.
6. Enginemen, in addition to sounding the whistle signal, one long and two short blasts, as prescribed in Transportation Rule 14(k), will sound this signal passing all track and bridge crews.
7. Lights will be displayed at night on all main line train order signals.
8. Operators must block trains in the same direction ten minutes apart, using train order signal for that purpose, placing it in "Stop" position after train to be protected has passed the train order signal three hundred feet. (Transportation Rule 91.)
9. Transportation Rule 728 is modified as follows:  
A red flag by day and in addition a red light at night, will be placed twenty (20) rail lengths distant from the point of obstruction, instead of fifty (50) rail lengths.  
A flagman will be located with the yellow signals one mile distant beyond the red signals. On the approach of a train, the flagman will display the yellow signals, which must be acknowledged by the enginemen, in accordance with Transportation Rule 14(g).  
In territory authorized by the Superintendent, the yellow signals will be placed as prescribed, and the flagman will not be required, except during fog, storms, or otherwise bad weather.  
In case of an emergency when track is found impassable and there are not sufficient men to send in both directions, the flagman will go in the direction that a train is expected first, and not less than fifty (50) rail lengths from obstruction, or further if necessary to insure good visibility, must place a red flag by day and in addition a red light by night, and ten (10) rail lengths further, two torpedoes must be placed; then protect the opposite side of the obstruction in the same manner, after which he must proceed out and place the yellow signals and torpedoes, as prescribed.  
Trains stopped by these signals must be governed by signal or instruction from the foreman in charge, who in giving such signal must use a yellow flag by day or a yellow light by night.
10. When a siding is to be used temporarily as a main track, the switches must be set and locked for the siding, and must be protected by flagmen until train order concerning the movement is issued to all trains, and the section foreman of that section notified, the flagmen to remain until released by the Superintendent.
11. In case of failure of communicating signal system on passenger trains, and on freight trains when conditions permit, the enginemen must receive a proceed signal from trainmen before passing any station.
12. Trap doors and vestibule doors on passenger trains must not be opened until after the train comes to a stop, and must be closed as soon as train starts to move, unless there is a train employe in a position to protect anyone from getting on or off while train is in motion. Trainmen must be sure before closing vestibule doors that no one is clinging to hand rails.
13. Car loads of cigarettes and whiskey must be placed in trains next ahead of caboose where they can be watched by trainmen.
14. In Column on time table marked "Car Capacity" prefix letter S indicates spur. Suffix letters E or W indicates the end of track at which switch is located.
15. **Speed Restrictions—**

	Pass.	Frt.
Maximum speed.....	60	40
When picking up train order hoops (Except where hoop stands are located).....	25	25
Locomotive Cranes, Pile Drivers, Steam Shovels, on own wheels....	25	25

Cranes, Piledrivers, Shovels and other machines on own wheels and equipped with boom must be handled with boom in trailing position, unless otherwise authorized by special instructions.  
Further speed reductions to be governed by the restriction signs.

#### 16. Bulletin Boards—

Portland	—Union Station telegraph office, Hoyt Street telegraph office, Roundhouse. Yard office (for yard men only)
Vancouver	—Telegraph office and roundhouse. Yard office (yard men only)

#### 16. Bulletin Boards—Continued—

Wishram	—Telegraph office and roundhouse.
Bend	—Telegraph office and roundhouse.
Goldendale	—Telegraph office.
Lyle	—Telegraph office.
Pasco	—Yard office, Passenger Station telegraph office, Roundhouse.
Spokane	—G.N. and N.P. passenger stations.
Parkwater	—Roundhouse.
Yardley	—Yard office.
Hillyard	—Roundhouse.

#### 17. Tunnel Locations—

	Length
No. 1—2.9 miles west of Prindle.....	2,381 ft.
2—1.7 miles east of Cooks.....	122
3—2.1 miles east of Cooks.....	416
4—2.6 miles east of Cooks.....	267
5—3.2 miles east of Cooks.....	394
6—3.9 miles east of Cooks.....	657
7—7.2 miles east of Bingen-White Salmon.....	966
8—7.5 miles east of Bingen-White Salmon.....	755
9—7.7 miles east of Bingen-White Salmon.....	392
10—7.9 miles east of Bingen-White Salmon.....	575
11—0.6 miles east of Lyle.....	269
12—2.1 miles east of Wishram.....	385
13—1.1 miles east of Plymouth.....	699
14—5.1 miles west of Farrington.....	203
15—2.5 miles west of Farrington.....	323
16—3.2 miles east of Farrington.....	2,494
17—0.9 miles west of Kahlotus.....	2,220
18—4.1 miles east of Hooper.....	369
19—0.6 miles west of Ft. Wright.....	2,134
<b>Oregon Trunk—</b>	
No. 1—1.4 miles west of Moody.....	782
2—3.4 miles west of Sherar.....	800
3—0.5 miles west of Frieda.....	519
4—0.6 miles east of North Junction.....	584
5—1.8 miles west of Gateway.....	542

#### 18. Junctions—

	Miles from Portland
N. P. T. Co., S. P. Co., U. P. RR., Portland.....	0.0
Portland Division, 1st Sub. Willbridge.....	4.5
Union Pacific RR. (Barnes).....	6.9
Union Pacific RR., No. Portland Jct.....	8.1
Northern Pacific Ry., Vancouver.....	9.9
Fourth sub-division, Lyle.....	85.4
Oregon Trunk Ry., Wishram.....	105.0
Northern Pacific Ry., S.P.&S. Jct.....	229.7
Northern Pacific Ry., Ainsworth Jct.....	233.5
Northern Pacific Ry., Snake River Jct.....	256.9
Northern Pacific Ry., Marshall Jct.....	368.8
Great Northern Ry., Ft. Wright.....	377.2
<b>Miles from Lyle</b>	
Klickitat Log & Lbr. Co., Klickitat.....	13.4
<b>Miles from Wishram</b>	
Union Pacific RR., O. T. Jct.....	1.5
City of Prineville Ry., Prineville Jct.....	132.3
Great Northern Ry., Bend at end of O. T. Ry. main track.....	152.4

#### 19. Interlocking Plants—

	Portland
Willbridge.....	4.5
Willamette River draw bridge.....	5.3
North Portland Junction.....	8.1
Oregon Slough draw bridge.....	8.7
Columbia River draw bridge.....	9.8
Marshall Junction, Northern Pacific Ry.....	368.8
Fort Wright, Great Northern Ry.....	377.2

The following engine whistle signals will be sounded by enginemen of trains and engines, in calling for route at Columbia River draw bridge between No. Portland and Vancouver:

- Eastward: one long blast for Northern Pacific Ry.; two short and one long blast for S.P.&S. Ry.
- Westward: from S.P.&S. Ry. main line, one short, one long and one short.
- From Northern Pacific Ry. four short.

### 19. Interlocking Plants—Continued—

In calling for diverging route through interlocking at North Portland Jct. the following engine whistle signals will be sounded:

{ From and to Union Pacific R.R. one short and one long blast.  
Stock yards: from S.P.&S. Ry. one short, one long and one short blast; from Union Pacific R.R. four short blasts.

Assigned hours of draw bridge tender, Oregon Slough bridge, are 8 A.M. to 4 P.M., but he is subject to call (Tel. University 2982) while off duty to operate draw for river traffic. Should it become necessary to flag through this interlocking plant, it must first be ascertained if the draw bridge tender is not on duty, and then flagmen must precede train and be sure that derails and rail locks are in proper position.

### 20. Location, Capacity and Facilities of Stockyards—

Location	No. of Pens	Capacity in Cars	Facilities
Vancouver	1	2	Water
Bingen-White Salmon	2	2	Water
Lyle	4	10	Water
North Dalles	3	7	None
Wishram	6	20	Water
Maryhill	2	5	None
Towal	1	1	None
Goodnoe	1	2	None
Roosevelt	4	10	Water
Alderdale	1	2	None
Whitcomb	2	4	None
Paterson	2	5	None
Plymouth	2	5	Water
Hover	1 sheep only	8	None
Kennewick	1 cattle	2	None
	1 sheep	8	
		6	
Pasco	6	6	Water
Harder	2	5	None
Washtucna	2	2	Water
Hooper	3	8	None
Benge	2	2	Water
Lantz	2	2	None
Macall	2	2	Water
Rockwell	2	4	None
Lamont	4	4	Water
Rodna	2	5	None
Amber	2	3	None
Warwick	1	2	None
Centerville	1	2	Water Near
Goldendale	3	5	Water
Sinamox	1	2	None
Shearer	2	4	Water, Feed Racks & Scales
Maupin	4	8	Water, Feed Racks & Scales
Nena	2	4	Feed Racks
Nathan	1	1	No Water
			Water & Feed Racks
Kaskela	1	1	None
South Junction	4	10	Water
Gateway	4	12	Water
Madras	4	12	Water
Metolius	1	2	Water & Feed Racks
			None
Culver	2	4	None
Terrebonne	4	8	Water & Feed Racks
Redmond	10	22	Water, Feed Racks & Scales
			Water & Feed Racks
Deschutes	2	4	Water & Feed Racks
			Water, Feed Racks & Scales
Bend	6	10	Water, Feed Racks & Scales

### WATCH INSPECTORS

Ball Railroad Time Service of Ohio, 284 Endicott Bldg.	St. Paul, Minn.
Weisfield & Goldberg, 530 S.W. Washington St.	Portland
Brandt & Zimmer, 270 S.W. Alder St.	Portland
Dillen Rogers, Killingsworth and Albina Aves.	Portland
Joseph Carter	Vancouver
H. W. Hull	Pasco
D. Burt Bryan	Pasco
T. J. Morris	Spokane
Mrs. Cora Squibb	Hillyard
M. H. Symons	Bend

## PORTLAND DIVISION FIRST AND SECOND SUB-DIVISIONS

(PORTLAND-SEASIDE)

- At United Junction**—Normal position of switch is for 1st sub-division main track.
- At St. Helens**—Trains must not block highway crossing while taking water.
- At Astoria**—Trains must not leave during open telegraph office hours without obtaining clearance Form A.
- At Warrenton**—Normal position of switch is for 1st sub-division.
- At Fort Stevens**—Normal position of switch is for track leading to barracks.
- Draw Bridges**—  
Clatskanie River, M. P. 62.7 center of draw.  
Blind Slough, M. P. 84.8 center of draw.  
John Day River, M. P. 94.8 center of draw.  
Youngs Bay, M. P. 102.6 center of draw.  
Skipanon Creek, M. P. 105.5 center of draw.
- Telegraphones**—  
Located at: Goble  
Rainier  
Pyramid  
Mayger  
Clatskanie  
Bradwood  
Westport  
Clifton  
Knappa  
VanDusen  
Astoria
- Speed Restrictions**—

	Pass.	Frt.
Maximum speed	40	30
Through Linnton	20	20
Through Scappoose	20	20
Over P. & S. W. Railway crossing, Scappoose	20	20
Through Rainier, (City Ordinance)	8	8
Rainier, between a point 700 feet east of Standard Oil spur and east end of pavement	8	8
Astoria, trains approaching passenger station	10	10
Between Tongue Point and east end of Youngs Bay	20	20
Over Bridge 98.0 east of Astoria	15	15
Trains must not exceed time table schedule between Astoria and Warrenton.		
Over Youngs Bay trestle and draw span, bridge 102.6, west of Astoria	12	12
On Pacific Avenue, Hammond	8	8
When Youngs Bay draw is open, eastward trains must stop 1000 feet west of draw span until draw is seen to be closed.		

**9. Commercial Tracks Not Shown as Stations on Time Table—**

	Miles from Portland	Car Capacity	Switch at	Station Number
Gasco.....	5.6	28	West end	A 5
Harbor Track.....	9.8	55	East end	A 10
Union Oil Co. Spur.....	28.4	7	West end	A 28 A
Standard Oil Co. Spur.....	28.4	7	West end	.....
Texas Oil Co. Spur.....	28.5	5	West end	.....
Trojan.....	40.7	24	East end	A 41
Dubois & Kittening Spur..	47.0	7	West end	A 47 A
Hickox Spur.....	47.3	12	East end	A 47 C
Warrenton Clay Spur.....	106.3	54	West end	F S 1
Point Adams Spur.....	108.3	5	East end	F S 3

**10. Derails—**

Willbridge	—Union Oil Co. lead Standard Oil Co. track No. 1 Bethlehem Steel Co. Spur.
Linnton	—Sunset Oil Co. spur No. 3 General Petroleum spur No. 2 C. E. Gunderson spur American Brake Shoe Co. spur
St. Helens	—East end of passing track  —Standard Oil Co. spur
Deer Island	—Siding
Marshland	—Spur track
Kerry, connection to Columbia & Nehalem River Railway	
Camp Clatsop	—Spur track
Gearhart	—Siding, west end

**11. Impaired Clearance—**

At Astoria, overhead crossing over port dock tracks leading from Pier 1 to Pier 3 have but 17-foot clearance from top of rail. Trainmen must use care when switching on this track.

## OREGON ELECTRIC RAILWAY

1. Eastward trains handling logs on flat cars will stop at Melas and make inspection of all such loads, and know before proceeding, that logs are riding properly for safe movement through the City of Salem.
2. Cars handled in trains or by yard engines in city streets, must in all cases have air coupled, except when switching operations, such as making up or breaking up of train, make it impracticable; and conductors and yard foremen will be held responsible for any damage resulting from violation of these instructions.
3. **At Portland—**Spring switch is located at the end of double track, Mead Street. Normal position is for movement of westward trains and permissible for eastward trains to run through this switch at speed of ten (10) miles per hour. Switch at end of double track Terwil is rigid hand throw switch and normal position is for movement of westward trains.

Breaker between 600 and 1200 volt trolley current on main line is located at intersection of Hood and Pennoyer streets. Westward trains must throw commutating switch to 1200 volt position before entering 1200 volt zone; eastward trains must throw commutating switch to 600 volt position after entering 600 volt zone.

**3. At Portland—Continued—**

Breaker between 600 and 1200 volt trolley current on Macadam Road, is located just south of Ross Island Bridge, approximately 90 feet north of intersection of Grover Street. Westward engines or motors must before passing this breaker throw commutating switch to 1200 volt position.

Eastward engines or motors must after passing breaker throw commutating switch to 600 volt position.

Cars exceeding 44 feet in length must not be handled between Front Avenue and Flanders Street and S.P.&S. connection 12th Avenue. Cars in excess of this length must be delivered through the Northern Pacific Terminal Company's connection Front Avenue.

Cars must not be spotted on Flanders Street between Second and Third Avenues.

Cars spotted on city streets must be protected by two red lanterns on each end of car, placed on each corner of the end of the car, one on the ladder and one on the hand hold on the opposite corner.

Locomotive cranes and pile drivers interchanged between S.P.&S. Ry. and Oregon Electric Ry. must be moved via Front Avenue through Northern Pacific Terminal Co. yard.

Double and triple loads must not be moved through the city streets. Such loads must be handled via Orenco cut-off.

Following rules will govern movement of Oregon Electric Ry. and United Railway Co. trains or engines over crossing of Union Pacific R. R. main line on Front Avenue, west end Willamette River bridge:

A color light signal is located on the south side of the Union Pacific Railroad-United Railways crossing on Front Avenue attached to the steel floor beams of the upper deck of the Steel bridge at a point directly over the United Railways tracks and governs movements on either of these tracks beyond the point where the signal is located.

An electrically interlocked hand-operated Hayes derail is located approximately 300 feet north of this signal in the Northern Pacific Terminal Company yard on the transfer track.

This derail is normally locked in the derailing position, and will be handled by train crews upon securing "unlock" from the Northern Pacific Terminal Company towerman. A telephone and an indicator are located at the derail for the use of train crews desiring to secure a clear signal. One ring of the 'phone will call towerman and when indicator shows "clear" derail may be operated. When derail has been shifted from rail and signal changes from "RED" to "GREEN," Oregon Electric-United Railways trains or engines may proceed past the light signal.

When switching crews have completed their work and the engine or motor and cars have moved to a point south of the light signal, the derail must be returned to its normal position on the rail and the towerman so advised.

Derail must not be restored to its normal position until the engine or motor and all cars have moved to a point south of the light signal.

4. **At Garden Home—**Normal position of junction switch, set and locked for first sub-division track.

Eastward trains must approach Nichols Street crossing at restricted speed and sound crossing whistle signal 600 feet west thereof.

5. **At Greenburg—**Interlocking signals govern the use of crossing with the Southern Pacific Co. Normal position of the signals is "STOP." Train approaching on either the O.E. or the S.P. tracks will cause the signal governing use of the crossing to change to "PROCEED" position, providing no other train is in the approach circuit, or within the limits of the plant.

If signal does not display "PROCEED" indication for train which is to use the crossing, the train must be preceded by a flagman, and train must not move beyond signal at "STOP" position until it receives "PROCEED" signal from flagman at the crossing. Flagman must not give "PROCEED" signal until it is known that the signals governing movement of train on intersecting line are at "STOP" and that any approaching train has stopped. In the event that signals on intersecting line do not indicate "STOP," movement over the crossing must be protected in both directions.

6. **At Salem**—All cars delivered by the Oregon Electric Ry. to the Southern Pacific Co. interchange track, Front Street, between Court and State Streets, between hours 4:30 P.M. and 7:30 A.M., must be protected by two red lanterns placed on each end of car, or when more than one car, on the outer end of each of the end cars in the cut. These red lanterns will be placed on end of cars near the corner, one on the ladder and one on the handhold on the opposite corner, in such position that the entire width of the car will be protected by the lights.

The following instructions must be observed in using interchange track between Oregon Electric Railway and Southern Pacific Company at Front and Court Streets:

Cars delivered by the Oregon Electric to the Southern Pacific Company will be shoved through the cross-over far enough west on the Southern Pacific Company tracks to clear west intersection of Court Street.

Cars delivered by the Southern Pacific Company to the Oregon Electric Ry. will be shoved through cross-over and far enough east on Oregon Electric Ry. main line to clear the east intersection of Court Street.

Cars exceeding 44 feet in length must not be placed on Fruit Union spur.

7. **At Albany**—Both switches to cross-over, S.P. interchange track, when not in use, must be left set for straight track and not for cross-over movement.

Cars exceeding 44 feet in length must not be placed on Hunt's Cannery spur.

8. **At Lebanon**—Junction switch, Oregon Electric Railway, is located at Southern Pacific Co. M.P.-688.9. Normal position of switch is for S.P. main track. Normal indication block signal on O.E. track is "STOP" and will change to "PROCEED" when switch is opened, providing S.P. main track is clear between block signals on S.P. main track, located on both sides of junction switch.

Telephone connected with telegraph office, Southern Pacific Company, Lebanon Station, is located in booth near junction switch.

In addition to a clear block signal, eastward O.E. Ry. trains must obtain permission from operator, Lebanon Station, before entering on S.P. Co. main track, and conductors of westward trains must immediately report to this operator by telephone when their trains have cleared S.P. Co. main track.

9. **At Harrisburg**—Engine bell must be rung continuously when moving between first road crossing east of depot and county road crossing, 1800 feet west.
10. **Automatic Substations** are designed to be started by one or two minutes continuous demand for power and to be shut down in seven or eight minutes after either a continuous or momentary demand for power. After a train has been standing a period of seven minutes or more, there will probably be insufficient power to lift the contactors and start train. When this occurs, place controller in "series" position and leave it there for at least two minutes or until train starts.

11. **Trolley Poles** must be lowered from trolley wire by means of a rope at all times. To lower trolley pole from trolley wire by getting on top of motor car or engine and taking hold of trolley pole by hand will not be permitted; to do so is dangerous and may prove fatal. Trolley poles on double end control cars must be kept under hook when not in use and must not be left suspended by retriever rope.

When trolley pole leaves wire or it becomes necessary to change it from one wire to another, controller must be returned to the "off" position, and speed of train reduced to five miles per hour; controller to remain in the "off" position until proceed signal has been given by person replacing or adjusting trolley pole.

12. **Electric Switches** used for cutting power off of trolley wire, are located at the following industrial spurs and tracks. These switches must be closed by trainmen before using track and must be opened after work is finished and left open when tracks are not in use, but before closing switch, trainmen must be sure that no one is working where they might come in contact with trolley wires:

S.P.&S. "30" yard (wires east of the east line of 12th Ave.) Portland: on pole east side 12th Avenue between Kearney and Johnson Streets. Tracks 40 and 41 in 12th Avenue yard, Portland: on pole near telephone booth, S.P.&S. cross-over.

Crane & Co. Spur, 12th Avenue, Portland: on pole at switch.

Macadam Road industry track, Portland: on first pole south of Ross Island bridge, west side Macadam Road.

Barstow-storage tracks: on pole east end of storage track.

Tonquin—industry spur: on pole east end spur.

Gravel Pit spur, Salem: on pole east end of spur.

## 12. Electric Switches—Continued—

Hunt Bros. spur, Salem: on pole 100 feet east of switch.

Larmer Warehouse spur, Salem: on pole in front of warehouse.

Union Fruit spur, Salem: on pole northeast corner Trade and High streets.

Spaulding Lumber Company's spur, Salem: on pole near east end of spur.

Terminal Ice and Cold Storage Company, Salem: on pole near center of spur track.

Terminal Ice and Cold Storage Company spur, Hillsboro: on pole near center of spur.

An interlocked electric track and trolley switch is located on the Gilmore Oil and General Petroleum spur at Albany; when open, this switch cuts off both the track and trolley from the main line. When using this spur, it will be necessary to close switch which is operated by a single lever and must not under any circumstances be operated under load. To avoid the possibility of this switch being opened under load, it must never be opened until after the engine has cleared the spur and the trolley pole of the engine has been changed from the spur to the main line trolley wire.

13. **Interchange Tracks** with S.P. Co. are located at Jefferson Street, Portland, Salem, Albany and Lasen.

14. **Section Breakers** have been cut in trolley wires at S.P. Co. bridge just north of Tualatin, one breaker about fifty feet on each side of the bridge. Normally the section between these breakers will be kept "dead" and motormen should shut off power and coast under this "dead" section. In the event train stalls on "dead" section, a switch is located on pole just west of bridge to make "dead" section alive. Switch to again be opened after movement has been completed.

Trolley wire between breakers S.P. Co. overhead bridge, Albany, will normally be kept alive. In case of the movement of steam locomotives or for any other reason it should be necessary to "kill" this trolley wire between the breakers, it may be done by opening the switch located on pole just east of bridge, switch to again be closed after movement has been completed.

15. **Instructions Governing Operation over Southern Pacific Company Track—**

### 5th Sub-division—

Oregon Electric Ry. trains cross Southern Pacific Co. main track just west of Signals 6912-6913 and use Albany and Page sidings, between Oregon Electric junction switch at LaFayette Street and Tallman Branch track.

Oregon Electric Ry. trains, in both directions, before crossing Southern Pacific Co. main track, must comply with Southern Pacific Co. Rules 83 and 83-C, using check of train register, Southern Pacific Co. Form CS-2529.

Conductors westward Oregon Electric Ry. trains will obtain this check of train register by telephone from S. P. Co. operator, Albany station, repeating it back to the operator for verification before delivering it to engineer.

Conductors eastward Oregon Electric Ry. trains will make this check from the train register at Albany station.

Oregon Electric Ry. trains, in both directions, must obtain permission from the S.P. Co. operator, Albany, by telephone, before crossing S.P. Co. main track and conductors must immediately report to this operator when their trains have cleared S.P. Co. main track.

This permission to cross S.P. Co. main track does not relieve conductors from seeing that their trains are protected against over-due first class trains, as prescribed by S.P. Co. Rule No. 93.

Before lining derail and main line switch, the position of Signals 6912-6913 located on the Southern Pacific Co. main track, just west of the connection, should be observed. If either signal is in the stop position, it indicates there is a train in the block; and derails should not be lined or the switch opened until such train has passed, signal cleared, or it has been ascertained that it is in the stop position for some other reason.

Telephone connected with telegraph office, Southern Pacific Company, Albany station, is located in booth at LaFayette Street.

Oregon Electric Ry. trains on Southern Pacific Co. tracks at Albany on what is known as the "Bridge Line," which extends from the point where O.E. Ry. trains enter Albany siding to Page, are not permitted to take water, fuel or other supplies, pick up or set out cars or perform any other service.

Between Page and Lebanon, picking up and setting out of cars is permissible under joint track operation.

16. **Impaired Clearance—**

Train employes are cautioned not to lean out of cab or cars while passing following overhead and side obstructions:

Union Pacific R.R. Steel bridge, Front and Glisan Streets, Portland.

**16. Impaired Clearance—Continued—**

Bridge 14-9 Tualatin River, one mile east of Tualatin.  
 Southern Pacific Co. overhead bridge, 15.3 east of Tualatin.  
 Southern Pacific Co. overhead bridge, Water Street, Albany.  
 Southern Pacific Co. siding, Water Street, Albany, opposite Senders Warehouse. These bridges will not clear a man on top of high car.  
 Double track on 12th Avenue between Overton and Glisan Streets and between Mead Street and Terwil, Portland, have only ten-foot nine-inch centers. Trains, yard engines, light engines and motors meeting or when moving on either track when cars are standing on the opposite track between these points must come to a stop and see that nothing is projecting that will foul equipment.  
 Trolley wire in the 30 and 40 yards, Portland, will not clear a man on top of high car.  
 All tracks in S.P.&S. Ry. and O.E. Ry. yards, Portland, have impaired clearance and will not clear a man on side of car.  
 Cab ventilators on steam engines will not clear the S.P. Co. overhead bridge at Tualatin and must be lowered passing that point.

**17. Speed Restrictions—**

	Freight
Between Portland and Eugene.....	30
Between Portland, 12th Avenue connection and Terwil.....	10
Eastward trains approaching Hood and Wood Streets crossing, Portland, must reduce speed so as to enable them to stop to avoid cross traffic on street.	
Over two main line switches, Garden Home telegraph office.....	8
Eastward freight trains will use not less than 15 minutes between Ryan Place and Terwil, and must not exceed speed of 15 miles per hour at any intermediate point. Retainers must be used in every case and enginemen will advise trainmen the number required to observe this speed restriction. Retainers will be turned up when train makes the stop for air brake test at road crossing east of Multnomah, and will be turned down when stop is made at Terwil.	
Between Terwil and Multnomah.....	15
Eastward trains must stop just before passing over first road crossing east of depot, Multnomah, and make brake test and be sure brakes are working properly before proceeding.	
Between Multnomah and Metzger.....	20
Between Tualatin and Nasoma.....	20
Over S.P. Co. crossing at Greenburg.....	15
Over first road crossing west of depot at Tigard.....	5
Under S.P. Co. bridge at Tualatin.....	15
Freight trains will use not less than 7 minutes between Prahl and Wilsonville and must not exceed speed of 8 miles per hour at any intermediate point. Trains must reduce to this speed and have brakes released before passing either of these points and will avoid as far as practical any application of brakes while on bridge 22-9, Wilsonville.	
In double heading trains operated by steam engines, when crossing bridge 22-9, Wilsonville, engines must in every case, be separated in the trains by not less than 5 cars, or if both engines are on head-end train must be stopped, lead engine cut off and cross over bridge before train is started.	
Through Salem.....	10
Passing paper mill, Salem.....	5
Through Albany.....	12
Between second crossing east of depot at Harrisburg and county road crossing, 1800 feet west.....	8
Over Willamette River bridge, 1 mile west of Harrisburg.....	15
Through Junction City.....	20
Between Garden Home and Forest Grove.....	20
Over Lombardy Avenue, Beaverton, and between depot and 1000 feet west.....	15
Over highway crossing at Beaverton.....	5
Through Hillsboro.....	10
Through Forest Grove.....	15
Between Pacific Avenue and end of track, Forest Grove.....	5
Between Orenco and Bowers Junction.....	20
Between Sweet Home and Calapooia.....	25
Between Lebanon and Sweet Home.....	25
Between Calapooia and Dollar.....	12
Trains handling logs on flat or gondola cars.....	20

**17. Speed Restrictions—Continued—**

Trains, engines and motors must approach all street crossings at Portland, Salem, Albany and Eugene at restricted speed and stop before crossing tracks of another railway company.  
 Trains, engines and motors must stop before crossing S.P. Co. track at Front and Trade Streets, Salem, and the three S.P. Co. crossings on Water Street, Albany, and not proceed until flagman has been sent to center of intersection and proceed signal received from him.  
 Trains, engines and motor movements over South Commercial Street, Salem, must be protected by a flagman, on the crossing.  
 When handling cars ahead of engines over Center Street, Salem, the intersection must be protected by a flagman and speed must not exceed five miles per hour. Other members of crew must be in position to pass signals rapidly in case of necessity.  
 All westward trains, engines and motors must stop at Fourth Street, Salem, and all trains, engines and motors must stop at Blair Street, Eugene, and at either place proceed only after a flagman has been sent to center of intersection and proceed signal received from him.

**18. Commercial Tracks Not Shown as Stations on Time Table—**

	Miles from Portland	Capacity	Station Number
Shops.....	2.6		E 3
Greenburg.....	11.0	9 E	E 11
Bonita, out of service.....	13.4	5 W	E 13
Durham.....	14.2	5 E	E 14 A
Tualatin Mill, out of service.....	15.4	4 W	E 15
Clutters, spiked.....	20.7	1 E	E 21
Prahl.....	23.7	3 W	E 24
Wallace.....	24.6	4 W	E 25
Butteville.....	25.8	6 E	E 26
Fargo.....	26.8	3 W	E 27
Fellers, spiked.....	29.8	6 W	E 30
Loganville, out of service.....	33.1	3 W	E 33
Gravel Pit Spur.....	48.5	37 E	E 48
Coover.....	78.6	11 W	E 79
Johnson and Powell Bros. Spur.....	109.7	10 E	E 110
Awbrey.....	114.9	2 E	E 115
	Miles from Leander		
Waterloo.....	19.5	2	S 20
Nye.....	22.1	8	S 22
Narrows.....	24.3	3	S 24
	Miles from Orenco		
Bendemeer.....	3.3	4 W	D 3
	Miles from Garden Home		
Firlock, spiked.....	0.6	2 W	F 1
Milkapsi, spiked.....	10.1	3 E	F 10
Moffat, spiked.....	12.0	2 E	F 12
Rhoades, spiked.....	12.4	3 E	F 12 A
Haynes, spiked.....	17.8	4 E	F 18

**19. Derails—**

Portland	—Macadam Street connection at Mead Street Portland Box & Lumber Co. spur, Mead Street O.E. shop track No. 3, east end O.E. shop track No. 6, west end
Multnomah	—Portable substation spur
Barstow	—Passing track, west end Yard track No. 2, west end
Garden Home	—Industry track
Greenburg	—Industry track
Durham	—Industry track
Nasoma	—Industry track No. 1
Curtis	—Passing track, east end
Donald	—Passing track, west end
Salem	—Producers Canning & Packing Co. spur Oregon Gravel Co. spur Paulus Bros. spur
Roberts	—Industry spur
Sweet Home	—Santiam Lbr. Co., east end.

**20. Draw Bridges—**

	Miles from Portland
Willamette River Bridge.....	106.0

# UNITED RAILWAYS CO. & G. C. & W. R. RAILROAD

- At Gray**—Roger mill spur may be used for empty log trains meeting and passing loaded log trains. Track may be used up to the old turn table and will accommodate 26 sets of logging trucks, engine and caboose into clear of main line.
- At United Junction**—Eastward trains will comply with Rule S83 by obtaining check on all over-due trains from train dispatcher by telephone. Normal position of switch will be for S.P.&S. Ry. first sub-division main track.
- At River Junction**—Normal position of switch is set for route to Rafton.
- At Wilkesboro**—Normal position of junction switch is set for G.C.&W.R. R.R.
- At Glenwood**—Deraill on main line 170 feet west of east switch must be left in derail position.
- Couplers**—When engines and cabooses equipped with adjustable couplers are being moved, the Federal Law prohibits the handling in one train, equipment including engines and cabooses, unless couplers are all in either the high or the low position. This includes couplers on engines and on cabooses on the opposite ends from those in service. When it is necessary to change position of adjustable couplers, there must be no failure to again connect between cutting lever and pin lifter so that cutting lever will be operated.

- Log Restrictions**—Following restrictions must be observed in the handling of logs loaded on disconnected trucks; loads must not exceed eleven (11) feet in width, and must not exceed eighty-five (85) feet in length, except when special permits are issued authorizing conductors to move loads exceeding eighty-five (85) feet in length.

The load limit for 80,000 capacity trucks will be 12,000 feet. Load limit for 100,000 capacity trucks will be 14,000 feet.

There must be a clearance of not less than twelve (12) inches from the top of rail to bottom of logs.

In event of stalling on grade, enginemen must not take slack in attempting to start, as to do so may result in pulling trucks from under loads.

Conductors will decline to handle in train, loads of logs which do not conform to the above restriction.

Trainmen handling logs on disconnected trucks will be required to ride out on loaded trains for the purpose of controlling trains over district between Keasey and Zan, Top Hill and Manning, Rockton and Rafton, Glenwood and Washburn, and between Miles Posts 6 and 3. Trainmen handling empty trucks when provided with caboose on rear, will not be required to ride out, but in every case there must be not less than two trainmen in caboose over district mentioned above.

Trainmen in log service when handling logs on disconnected trucks will be required to wear shoes properly equipped with caulks.

Log trains must not cross overhead crossing just west of Wilkesboro when Southern Pacific Company trains are passing underneath. If an S.P. Co. train is passing or approaching, log train must come to a stop and wait until S.P. Co. train has cleared the crossing.

Whenever from any cause, logs are lost from cars or trucks, conductors will file a message at the first open telegraph office, addressed to Superintendent, showing number of logs lost, location, brand and whether from trucks or flat cars.

Double heading of trains handling logs on disconnected trucks is prohibited.

8. Speed Restrictions—	Freight
Between United Junction and Wilkesboro . . . . .	25
Between Wilkesboro and Keasey . . . . .	20
Over all bridges between United Junction and Tunnel No. 1 . . . . .	12
Between Wilkesboro and Glenwood . . . . .	15
Eastward trains will use not less than 35 minutes between Top Hill and Manning.	
Trains handling logs, disconnected trucks . . . . .	12
Trains handling empty disconnected trucks . . . . .	15

## 9. Commercial Tracks Not Shown as Stations on Time Table—

	Miles from United Jct.	Car Capcy.	Switch at	Station Number
Ban Spur . . . . .	1.0	S 1	West end	U 1 A
Falkenberg . . . . .	3.4	S 2	West end	U 3
Culliton . . . . .	5.9	S 9	West end	U 6 A
Helvetia . . . . .	7.6	S 6	East end	U 8
Connell . . . . .	9.1	S 1	West end	U 9
Twinfir (spiked) . . . . .	9.5	S 3	East end	U 10

## 9. Commercial Tracks—Continued—

Lincoln (spiked) . . . . .	10.2	S 6	East end	U 10 A
Vadis . . . . .	13.3	S 8	East end	U 13
		S 12	Both ends	U 13
Portland Docks Inc. . . . .	13.3	S 6	East end	U 13 A
Christie . . . . .	15.5	S 11	East end	U 15
		Mill		
Buxton . . . . .	24.6	Spur Conn.	West end	U 25
Elwood Lbr. Co. spur . . . . .	24.7	S 12	West end	U 25 A
Outfit Spur . . . . .	29.3	S 8	West end	U 29 A
Schmidlin Spur . . . . .	31.6	S 3	East end	U 32
McPherson No. 1 . . . . .	36.4	Log spur	East end	U 36
Trehorn (spiked) . . . . .	36.7	S 3	East end	U 37
Tara . . . . .	45.2	S 4	East end	U 45

## 10. Derails—

Portland	—Kautz Spur, 26th and Nicolai Streets
	Portland Furniture Mfg. Co. Spur, on Macadam Road
Burlington	—East end passing track
Tunnel Spur	—Industry spur
Rockton	—Industry spur
Vadis	—E. J. Sherman, siding west end
Dixon	—Interchange track No. 1, west end
Manning	—Industry spur
Top Hill	—Siding, east end
	Outfit spur
Glenwood	—South Mill spur
	North Mill siding
	Main line, just west of head block to South Mill spur

## 11. Automatic Block District and Signal Location—

	Between	East Signal	West Signal
MP 6.6 and MP 7.6		7.6	6.6
MP 30.9 and MP 31.6		31.6	No Signal (end of bond M.P. 30.9)

# ALL SUB-DIVISIONS, INCLUDING O. E. RAILWAY, UNITED RAIL- WAYS CO. & G. C. & W. R. RAILROAD

- Special rules supersede rules and regulations of Transportation Department.
- Rule S83 will not apply at initial stations which are not telegraph stations, and at telegraph stations except during office hours.
- When passenger trains meet at stations where view is not clear, and track straight for at least one-half mile ahead, train holding the main track must stand one thousand (1000) feet from the switch to be used by opposing train until such train has arrived.
- Before coupling to or moving occupied outfit cars, trainmen must notify occupants and see that all ladders and other obstacles are cleared before cars are moved.
- The movement of trains over street crossings within corporate limits of a city where the city has installed electric traffic signals, will be governed by the indication of the traffic signal during the period when such signals are in operation.  
At street intersections within the corporate limits of a city, where "STOP" signs are displayed, for the protection of traffic on through streets, trains and yard engines must come to a stop at such signs and then proceed over intersection at restrictive speed, bearing in mind that the Oregon State law provides that any and all vehicles on the right have the right of way.
- Trains must not pass under overhead crossing of logging roads while logging train is passing over the crossing.
- Trains must not block any street or highway crossing in excess of five minutes. When delay will exceed five minutes, conductors must see that crossings are promptly cut.
- Whenever descending grades require the use of retainers, trains will be stopped at the top of grade and retainers turned up, and stop made at foot of grade for retainers to be released.
- In column, on time table marked "Car Capacity" prefix letter "S" indicates spur, suffix letters "E" or "W" indicate the end of track at which switch is located.

10. Yardmen are prohibited from shoving cars on yard tracks without having a member of the crew stationed on the leading car being shoved or at extreme end of track being used, and remainder of crew in such positions as will enable signals to be passed to enginemen in ample time to prevent cars being shoved over end of track, or fouling other tracks, or causing damage to bumper or equipment. Conductors and engine foreman will be held personally responsible in every case where cars are shoved over end of track or equipment damaged as a result of violation of these instructions.

11. Transportation Rule 2 (Consolidated Code), and Maintenance of Way rules require the following officers and employes who must use watches that have been examined and certified to by designated inspectors: All Division Officers, Track Inspectors, Section Foremen, Bridge and Building Foremen, Electrical Department Line Foremen, and Telegraph Line Foremen and Linemen.

12. Enginemen, in addition to sounding the whistle signal, one long and two short blasts, as prescribed in Transportation Rule 14(K), will sound this signal passing all track and bridge crews.

13. Lights will be displayed at night on all main line train order signals.

14. Operators must block trains in the same direction ten minutes apart, using train order signal for that purpose, placing it in "Stop" position after train to be protected has passed the train order signal three hundred feet. (Transportation Rule 91.)

15. Transportation Rule 728 is modified as follows:  
A red flag by day and in addition a red light at night, will be placed twenty (20) rail lengths distant from the point of obstruction, instead of fifty (50) rail lengths.

A flagman will be located with the yellow signals one mile distant beyond the red signals. On the approach of a train, the flagman will display the yellow signals, which must be acknowledged by the enginemen, in accordance with Transportation Rule 14(g).

In territory authorized by the Superintendent, the yellow signals will be placed as prescribed, and the flagman will not be required, except during fog, storms, or otherwise bad weather.

In case of an emergency when track is found impassable and there are not sufficient men to send in both directions, the flagman will go in the direction that a train is expected first, and not less than fifty (50) rail lengths from obstruction, or further if necessary to insure good visibility, must place a red flag by day and in addition a red light by night, and ten (10) rail lengths further, two torpedoes must be placed; then protect the opposite side of the obstruction in the same manner, after which he must proceed out and place the yellow signals and torpedoes, as prescribed.

Trains stopped by these signals must be governed by signal or instructions from the foreman in charge, who in giving such signal must use a yellow flag by day or a yellow light by night.

16. When a siding is to be used temporarily as a main track, the switches must be set and locked for the siding, and must be protected by flagmen until train order concerning the movement is issued to all trains, and the section foreman of that section notified, the flagmen to remain until released by the Superintendent.

17. In case of failure of communicating signal system on passenger trains, and on freight trains when conditions permit, the enginemen must receive a proceed signal from trainman before passing any station.

18. Car loads of cigarettes and whiskey must be placed in trains next ahead of caboose where they can be watched by trainmen.

19. Trap doors and vestibule doors on passenger trains must not be opened until after the train comes to a stop and must be closed as soon as train starts to move, unless there is a train employe in the doorway in a position to protect any one from getting on or off while train is in motion.

Trainmen must be sure before closing vestibule doors that no one is clinging to hand rails.

## 20. Impaired Clearance—

All trainmen and others interested are hereby warned that the majority of cattle guards are closer to tracks than required standard of the Public Utilities Commissioner of Oregon.

Sign reading: "Impaired Clearance" placed upon switch stand at entrance of spur or siding indicates there are platforms or structures located along the side of same, which do not provide minimum horizontal clearance prescribed by Public Utilities Commissioner of Oregon. Employes will use care and avoid risk of injury while working on spurs or sidings protected with "Impaired Clearance" sign.

## 21. Speed Restrictions—

	Pass.	Fr.
Passing telegraph offices when picking up train orders.....	25	25
Over switches in paved streets.....	10	10
Locomotives backing up.....	20	20
Locomotive Cranes, Pile Drivers, Steam Shovels on own wheels.....	25	25
Cranes, pile drivers, shovels and other machines on own wheels, and equipped with boom, must be handled with boom in trailing position, unless otherwise authorized by special instructions.		

## 22. Bulletin Boards—

Portland	—Union Depot telegraph office
	Hoyt Street telegraph office
	Roundhouse
Astoria	—Passenger Depot
Seaside	—Passenger Depot
Salem	—Depot
Albany	—Depot
Eugene	—Depot
Sweet Home	—Depot
Leander (for 5th sub-division only)	—Telephone booth
Vernonia	—Depot

## 23. Overhead Crossings—

	Miles from Portland
United Railways, 0.5 mile west of United Jct.....	10.5
K. P. Timber Ry., 0.1 mile east of Kerry.....	69.7
Bradley Woodward Lumber Co., Bradwood.....	76.8
Big Creek Logging Co., 0.5 mile west of Knappa.....	87.0

## 24. Grade Crossings—

	Miles from Portland
(O. E. 1st-2nd Sub-Division)	
Southern Pacific Company, Greenburg.....	11.1
Southern Pacific Company, Salem.....	50.7
Southern Pacific Company, Salem.....	50.8
Southern Pacific Company, Salem.....	51.0
Southern Pacific Company, Salem.....	51.3
Southern Pacific Company, Albany.....	77.4
Southern Pacific Company, Albany.....	77.5
Southern Pacific Company, Albany.....	77.7
Southern Pacific Company, Lasen.....	120.5

	Miles from Garden Home
(O. E. 4th Sub-Division)	
Southern Pacific Company, Hillsboro.....	13.3

## 25. Interlocking Plants—

	Miles from Portland
Willbridge, Portland Div. 1st Sub-Division.....	4.5
Scappoose, P. & S. W. Ry., Portland Div. 1st Sub-Division....	20.3
Greenburg, S. P. Co., O. E. Ry. 1st Sub-Division.....	11.1

## 26. Junctions—

	Miles from Portland	Switch at
Vancouver Division, Willbridge.....	4.5	.....
United Railways Co., United Jct.....	10.0	.....
Portland & Southwestern Ry., Scappoose.....	20.1	East end
K. P. Timber Ry., Kerry.....	69.8	West end
Bradley Woodward Lumber Co., Bradwood....	76.9	West end
Crossett Western Lumber Co., Knappa.....	86.8	West end

	Miles from United Jct.
United Railways Co.—	
S. P. & S. Ry., United Junction.....	0.0
Southern Pacific Co., Wilkesboro.....	16.4

## 27. Tunnel Locations—

	Length
No. 1—1.0 mile west of Tunnel Spur, United Rys. Co.....	4111 ft.
No. 2—0.3 mile west of Top Hill, United Rys. Co.....	1136 ft.
No. 3—1.2 miles east of Mayger, 1st Sub.-Portland-Seaside....	188 ft.

## 28. Location, Capacity and Facilities of Stockyards—

	No. of Pens	Capacity in Cars	Facilities
Deer Island.....	1	1	None
Quincy.....	1	1	Water
Clifton.....	1	1	None
Astoria.....	1	2	None
Carnahan.....	2	1	None
Warrenton.....	1	1	None
Oregon Electric Ry.—			
Broadacres.....	1	1	None
Leander.....	4	5	Water

## WATCH INSPECTORS

Ball Railroad Time Service of Ohio . . . . .	284 Endicott Bldg., St. Paul, Minn.
Weisfield & Goldberg . . . . .	530 S. W. Washington St., Portland
Dillen Rogers . . . . .	Killingsworth & Albina Aves., Portland
Brandt & Zimmer . . . . .	270 S. W. Alder St., Portland
E. M. Young . . . . .	Rainier
Loop-Jacobsen . . . . .	Astoria
A. L. Kullander . . . . .	Vernonia
Hartman Bros. Co. . . . .	Salem
F. M. French & Sons . . . . .	Albany
Seth Laraway . . . . .	Eugene
W. E. White . . . . .	Sweet Home

## CLEARANCE TABLE

	HEIGHTS ABOVE TOP OF RAIL												
	1' Wide	2' Wide	3' Wide	4' Wide	5' Wide	6' Wide	7' Wide	8' Wide	8' 6" Wide	9' Wide	10' Wide	11' Wide	11' 6" Wide
Portland—Vancouver . . . . .	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 2"	19' 2"	18' 3"	17' 9"	17'
Vancouver—Spokane . . . . .	20'	20'	19' 6"	19' 6"	19' 6"	19'	18' 6"	18'	18'	18'	17' 6"	17'	16' 6"
Lyle—Goldendale . . . . .	20'	20'	19' 6"	19' 6"	19' 6"	21'	21'	21'	20' 6"	19' 10"	19' 5"	18' 9"	16'
Wishram—Bend . . . . .	21'	21'	21'	21'	21'	17'	17'	17'	15' 9"	15' 9"	15' 6"	14'	—
Portland—Holladay . . . . .	18' 6"	18'	17' 6"	17'	17'	20'	20'	20'	20'	20'	20'	20'	18'
Warrenton—Fort Stevens . . . . .	20'	20'	20'	20'	20'	17'	17'	17'	17'	17'	17'	—	—
O. E. Ry.—U. Rys. Portland Yard Limits . . . . .	17'	17'	17'	17'	17'	19'	19'	19'	19'	19'	19'	—	—
Portland—Garden Home . . . . .	17'	17'	17'	17'	17'	19'	19'	19'	19'	19'	19'	—	—
Garden Home—Forest Grove . . . . .	19'	19'	19'	19'	19'	19'	19'	19'	19'	19'	19'	19'	16'
Garden Home—Eugene . . . . .	15' 9"	15' 9"	15' 9"	15' 9"	15' 9"	15' 9"	15' 9"	15' 9"	15' 9"	15' 9"	15' 9"	—	—
Lebanon—Dollard . . . . .	19'	19'	19'	19'	19'	19'	19'	19'	18' 6"	18'	18'	17'	16'
Orengo—Bowers Junction . . . . .	19'	19'	19'	19'	19'	19'	19'	19'	19'	19'	19'	19'	18'
United Junction—Wilkesboro . . . . .	19'	19'	19'	19'	19'	19'	19'	19'	18' 6"	18'	17' 6"	17'	—
Wilkesboro—Keasey . . . . .	19'	19'	19'	19'	19'	19'	18' 6"	18' 3"	18'	17' 9"	17' 6"	17'	—
Wilkesboro—Glenwood . . . . .	20'	20'	20'	19'	19'	19'	19'	19'	18' 6"	18'	18'	18'	—

Conductors must be absolutely positive that loads do not exceed these dimensions and must not move cars of greater dimensions without instructions from Superintendent.

## TONNAGE RATING

DISTRICT	Ruling Grade	O1, O3		H-1	C-1	GN, O4		GN, O6		GN, N2	Z6
		500-507	530-534			3210-3254	3350-3357	3368-3369	3358		
Parkwater-Marshall . . . . .	1.2	809	1872	1539	1121	738	1993	2051	2055	1931	3250
Hillyard-Ft. Wright . . . . .	Down	6738	15000	12700	9725	6623	16258	16671	17051	16170	Car Limit
Ft. Wright-Moek . . . . .	1.0	965	2230	1838	1348	907	2368	2436	2450	2304	3820
Marshall-Moek . . . . .	1.0	965	2230	1838	1348	907	2368	2436	2450	2304	3500
Moek-Vancouver . . . . .	Down	6738	15000	12700	9725	6623	16258	16671	17051	16170	Car Limit
Vancouver-Snake River . . . . .	.2	3200	8000	6049	4591	3110	8445	7947	8102	7658	12798
Snake River-Moek . . . . .	.4	2071	4770	3928	2952	1990	5011	5162	5246	4953	8153
Moek-Ft. Wright . . . . .	Down	6738	15000	12700	9725	6623	16258	16671	17051	16170	Car Limit
Ft. Wright-Hillyard . . . . .	1.0	965	2230	1838	1348	907	2368	2436	2450	2304	3820
Moek-Marshall . . . . .	Down	6738	15000	12700	9725	6623	16258	16671	17051	16170	Car Limit
Marshall-Parkwater . . . . .	1.0	965	2700	1838	1348	907	2368	2436	2450	2304	7000
Wishram-South Jet . . . . .	.6	1514	3500	2870	2146	1438	3692	3792	3853	3622	6000
South Jet-Madras . . . . .	1.5	644	1350	1228	882	574	1590	1450	1450	1450	2700
Madras-Bend . . . . .	1.0	965	2230	1838	1348	907	2368	2436	2450	2304	3820
Bend-Madras . . . . .	.5	1752	4040	3319	2490	1674	5000	5000	5000	5000	6890
Madras-Wishram . . . . .	Down	6738	15000	12700	9725	6623	16258	16671	17051	16170	Car Limit

Make 10% reduction when temperature 5° to 25° above. Make 20% reduction when temperature 5° above to 10° below.  
Make 30% reduction when temperature 10° below or colder.

## TONNAGE RATING

Ruling Grade	A-1 1-5	A-3 7-8	D-2 150-151	D-3 157	D-4 153-154	D-5 159	D-7 160-162	N-4 303-304	N-6, F-1 325-329 451-466	N-2, N-7 355-368 335-339
Level	6897	7302	6477	6463	6076	5711	7793	8328	8900	9975
.1%	4347	4722	4170	4165	3811	3544	4898	5362	5740	6396
.2%	3197	3473	3054	3054	2800	2598	3599	3928	4211	4743
.3%	2519	2741	2396	2398	2203	2304	2834	3112	3309	3796
.4%	2072	2252	1962	1968	1810	1672	2312	2558	2715	3007
.5%	1755	1907	1654	1659	1530	1411	1971	2164	2293	2602
.6%	1518	1650	1424	1431	1322	1216	1704	1871	1978	2251
.7%	1334	1464	1247	1253	1161	1066	1497	1643	1729	1979
.8%	1188	1292	1105	1112	1032	945	1332	1462	1540	1762
.9%	1069	1163	989	997	927	847	1197	1314	1381	1585
1.0%	970	1055	893	900	840	766	1085	1191	1250	1438
1.1%	886	964	812	821	766	697	990	1087	1138	1314
1.2%	815	887	742	751	703	638	909	999	1046	1208
1.3%	752	280	682	691	649	586	839	921	960	1116
1.4%	698	760	621	638	601	539	778	854	888	1035
1.5%	650	708	583	592	559	503	724	795	824	964
1.6%	608	662	542	551	522	468	676	742	768	901
1.7%	570	621	505	514	488	436	633	695	718	845
1.8%	536	584	472	481	458	408	595	652	672	794
1.9%	504	550	442	451	431	381	560	615	631	748
2.0%	477	520	414	428	406	360	530	580	594	707
2.1%	451	492	389	399	384	328	499	548	559	669
2.2%	428	469	367	377	363	308	475	519	528	634

Ruling Grade	N-1 350-352	O-10-3 500-507 530-534	O-2 525	C-1 600-609	H-1 620-624	GCWR 1	GN O-4 3210- 3254	GN O-5 3350- 3357	GN O-6 3368- 3369	GN O-6 3358	Z-6 900-905
Level	6738	15000	12700	6623	9725	6016	16258	16671	17051	16170	27260
.1%	4353	10000	8225	4258	6265	3885	10521	10792	11020	10422	18117
.2%	3200	8000	6049	3110	4591	2853	8445	7947	8102	7658	12798
.3%	2519	5800	4766	2538	3603	2247	6108	6268	6381	6028	9999
.4%	2071	4770	3928	1990	2952	1838	5011	5162	5246	4953	8153
.5%	1752	4040	3319	1674	2490	1555	4262	4377	4441	4191	6890
.6%	1514	3500	2870	1438	2146	1356	3692	3792	3853	3622	6000
.7%	1320	3070	2524	1256	1879	1185	3248	3338	3375	3181	5251
.8%	1184	2730	2247	1110	1666	1054	2997	2977	3004	2830	4668
.9%	1064	2460	2022	990	1492	947	2608	2682	2706	2548	4193
1.0%	965	2230	1838	907	1348	858	2368	2436	2450	2304	3820
1.1%	880	2037	1675	809	1226	783	2166	2239	2237	2104	3465
1.2%	809	1872	1539	738	1121	719	1993	2051	2055	1931	3153
1.3%	747	1729	1420	676	1031	663	1842	1898	1898	1782	2934
1.4%	692	1604	1319	622	952	614	1712	1764	1760	1652	2716
1.5%	644	1493	1228	574	882	572	1590	1645	1639	1537	2700
1.6%	601	1395	1148	532	821	533	1494	1540	1531	1435	2361
1.7%	563	1308	1077	491	765	499	1402	1446	1434	1343	2211
1.8%	529	1229	1012	462	748	469	1320	1362	1348	1261	2076
1.9%	498	1158	953	429	671	441	1245	1285	1269	1187	1953
2.0%	470	1093	900	401	630	416	1178	1227	1198	1120	1842
2.1%	408	1034	852	378	592	393	1116	1153	1133	1058	1747
2.2%	387	976	808	352	559	372	1059	1095	1074	1002	1648

## TONNAGE RATING

District	Class of Engine																		
	N-1		N-4		N-6, F-1		N-2, N-7		D-2		D-3		D-4		D-6		D-7		
	350-352	2295	303-304	2835	325-329 451-466	3012	3401	355-368 335-339	3401	150-151	2079	157	2084	153-154	1866	159	1988	160-162	2574
Linnton to Rafton.....	0.35																		
Rafton to River Jet.....	2.3	366	490	497	650	650	345	345	345	345	345	345	342	288	288	288	461	461	
United Jet. to River Jet.....	2.3	366	490	497	650	650	345	345	345	345	345	342	288	288	288	461	461	461	
River Jet. to Wilkesboro.....	2.3	366	490	497	650	650	345	345	345	345	345	342	288	288	288	461	461	461	
Wilkesboro to Keasey.....	2.3	366	490	497	650	650	345	345	345	345	345	342	288	288	288	461	461	461	
Keasey to Wilkesboro.....	1.5	644	795	824	964	964	583	583	583	583	583	592	559	503	503	724	724	724	
Wilkesboro to Glenwood.....	2.2	387	519	528	634	634	367	367	367	367	367	377	363	308	308	475	475	475	
Glenwood to Wilkesboro.....	0.8	1184	1462	1540	1762	1762	1105	1105	1105	1105	1112	1082	945	945	945	1332	1332	1332	
Wilkesboro to United Jet.....	1.2	809	999	1046	1208	1208	742	742	742	742	751	703	638	638	638	909	909	909	

### FOOTAGE RATING FOR ENGINES IN LOGGING SERVICE

District	Ruling Grade	1.5	1.2	.8
Keasey to Rafton.....	1.5	112,000	126,000	140,000
Wilkesboro to Rafton.....	1.2	140,000	154,000	168,000
Glenwood to Wilkesboro.....	.8	214,000	251,000	267,000
Keasey to Rafton.....	1.5	112,000	126,000	140,000
Wilkesboro to Rafton.....	1.2	140,000	154,000	168,000
Glenwood to Wilkesboro.....	.8	214,000	251,000	267,000
Keasey to Rafton.....	1.5	112,000	126,000	140,000
Wilkesboro to Rafton.....	1.2	140,000	154,000	168,000
Glenwood to Wilkesboro.....	.8	214,000	251,000	267,000
Keasey to Rafton.....	1.5	112,000	126,000	140,000
Wilkesboro to Rafton.....	1.2	140,000	154,000	168,000
Glenwood to Wilkesboro.....	.8	214,000	251,000	267,000

## TONNAGE RATING

DISTRICT	Ruling Grade	D-2 150 151	D-3 157	D-4 153 154	D-6 159	D-7 160 162	N-1, 350, 352
Portland to Goble.....	.56	1489	1512	1423	1333	1669	3000
Goble to Astoria.....	.31	2310	2338	2189	2066	2571	3000
Astoria to Flavel.....	.33	2193	2220	1949	1961	2442	3000
Warrenton to Holladay.....	1.22	742	800	766	831	935	3000
Holladay to Warrenton.....	.70	1215	1236	1168	1036	1374	3000
Flavel to Astoria.....	.44	1742	1768	1658	1561	1931	3000
Astoria to Goble.....	.38	2086	2113	1980	1866	2325	3000
Goble to Portland.....	.52	1600	1629	1532	1439	1798	3000

## TONNAGE RATING ELECTRIC ENGINES

DISTRICT	60-Ton Locomotives	21-22-23 24-25-26
Jefferson Street.—Multnomah		350
Multnomah—Tualatin		800
Tualatin—Wilsonville		860
Wilsonville—Fellers		730
Fellers—Salem		750
Salem—Albany (Freight Yard)		970
Albany—Eugene		1,050
Eugene—Albany		970
Albany—Salem		975
Salem—Wilsonville		975
Wilsonville—Tigard		670
Tigard—Portland		630

Rating on motors 40, 41, 42—100 tons less than rating shown for 60-ton locomotives.

## TONNAGE RATING (Steam Engines)

DISTRICT	Ruling Grade	CLASS OF ENGINE						
		N-1	N-2, N-7	N-4	N-6, F-1	D-4	D-6	D-7
		350-352	355-368 335-339	303-304	325-329 451-466	153-154	159	160-162
Multnomah to Tualatin.....	.70	1653	2009	1718	1773	1233	1106	1410
Tualatin to Wilsonville.....	.95	1390	1685	1444	1483	998	885	1121
Wilsonville-Fellers.....	1.00	1359	1606	1377	1413	953	895	1132
Fellers to Salem.....	.8	1474	1789	1531	1578	1098	982	1301
Salem to Albany.....	.4	2557	3117	2659	2760	1918	1736	2198
Albany to Eugene.....	.3	3106	3790	3231	3360	1606	2118	2677
Eugene to Albany.....	.4	2557	3117	2659	2760	1918	1736	2198
Albany to Salem.....	.4	2557	3117	2659	2760	1918	1736	2198
Salem to Wilsonville.....	.85	1397	1695	1451	1491	1039	970	1187
Wilsonville to Tigard.....	1.0	1236	1460	1253	1285	851	811	998
Tigard to Multnomah.....	1.67	737	887	765	848	540	511	624
Bowers Jct. to Orenco.....	DOWN	4000	5478	4000	5000	4200	4200	4500
Orenco to Bowers Jct.....	1.00	1236	1460	1253	1285	851	795	998
Orenco to Garden Home.....	2.00	600	719	623	624	435	374	491
Garden Home to Orenco.....	2.33	508	597	526	523	365	310	412
Albany to Sweet Home.....	2.00	600	719	623	624	435	374	491
Sweet Home to Albany.....	DOWN	4000	5478	4000	5000	4200	4200	4500
Sweet Home to Dollar.....	2.4	490	583	507	503	351	297	396
Dollar to Sweet Home.....	1.75	693	753	719	726	506	438	574

### SPEED TABLE

60 miles per hour is equivalent to one mile in 1 minute and 0 seconds  
55 miles per hour is equivalent to one mile in 1 minute and 5 seconds  
50 miles per hour is equivalent to one mile in 1 minute and 12 seconds  
45 miles per hour is equivalent to one mile in 1 minute and 20 seconds  
40 miles per hour is equivalent to one mile in 1 minute and 30 seconds  
35 miles per hour is equivalent to one mile in 1 minute and 43 seconds  
30 miles per hour is equivalent to one mile in 2 minutes and 0 seconds  
25 miles per hour is equivalent to one mile in 2 minutes and 24 seconds  
20 miles per hour is equivalent to one mile in 3 minutes and 0 seconds  
15 miles per hour is equivalent to one mile in 4 minutes and 0 seconds

R. C. SCOFFERN, Trainmaster, Portland  
A. E. JOHNSON, Trainmaster, Portland  
J. A. O'HEARN, Trainmaster, Vancouver  
F. L. WEBER, Asst. Trainmaster, Spokane  
H. JACKSON, Chief Dispatcher, Portland  
F. C. WAGER, Master Mechanic, Vancouver  
C. E. BARNES, Traveling Engineer, Vancouver  
R. M. MYLES, Traveling Engineer, Spokane