

NORTHERN PACIFIC RAILWAY COMPANY

TACOMA DIVISION

Special Instructions No. 10

In Effect at 12:01 A. M.
Pacific Standard Time

Tuesday, January 1, 1952

These Instructions constitute a part of the Time Table currently in effect.

Employees whose duties are in any way affected by the Time Table must have a copy of The Current Special Instructions and Current Time Table with them on duty.

C. CORSER,
Assistant General Manager.

T. J. KANE,
Superintendent.

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General Superintendent of
Transportation.

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ALL SUBDIVISIONS.

1. Speed Restrictions—

Maximum speeds permitted:

Passenger trains	75 MPH.
Freight and mixed trains	50 MPH.
"J" Manifest freight trains	35 MPH.

The above speeds are subject to the restrictions of maximum speeds in miles per hour as shown by zones under each subdivision.

Where automatic block and interlocking rules and signal indications require movement at restricted speed, such movement must be made prepared to stop short of train, obstruction or switch not properly lined and be on lookout for broken rail or anything that may require the speed of a train to be reduced, but a speed of 15 MPH must not be exceeded.

The definition of Restricted Speed, as designated on page 8 of the 1945 Edition of the Consolidated Code of Operating Rules, will continue to apply except where automatic block and interlocking rules and signals govern as specified above.

Reduce speed limits, within the zones listed, are designated by Advance-warning signs (diagonally upwards), Reduce speed signs (square with clipped corners) and Resume speed signs (vertical).

The Advance-warning signs are, except as otherwise specified, located approximately 3000 feet in advance of the Reduce speed signs, and the numerals on both signs indicate in miles per hour the maximum speed permitted from the Reduce speed sign to another Reduce speed limit, or to a sign indicating a higher speed, or to a Resume speed sign.

If speeds authorized by zones or by Reduce speed signs, are greater than that prescribed below for certain trains or engines, such trains or engines must not exceed the prescribed speeds.

Locations where reduced speeds are required but not indicated by signs, are listed under the zones of maximum speeds permitted for each subdivision.

All trains and engines, except as otherwise specified:

Through crossovers, turnouts and gantlets, except where fixed signals provide otherwise.....15 MPH.

Handling steam wrecking cranes, pile drivers, locomotive cranes and similar equipment30 MPH.

Handling 4-wheel scale test cars { Main Line35 MPH.
and scale test car 251 } Branch Lines25 MPH.

Picking up train orders from operators30 MPH.

Engines—	Handling	Running
Classes—	trains	light

All A and Q (except on passenger trains where higher speed is authorized)....60 MPH.

Z-6, Z-7 and Z-860 MPH. 50 MPH.

Z-5, Y, Y-1, Y-340 MPH. 35 MPH.

Z-3, Z-435 MPH. 30 MPH.

S-4, T, T-1, W to W-5, inc., Y-250 MPH. 45 MPH.

Steam switch engines, without engine trucks, under all conditions15 MPH. 15 MPH.

All other steam engines, backing up.....30 MPH. 30 MPH.
(This restriction does not apply when engines are used as helpers not on head end of train.)

Diesel-electric engines—

No. 9835 MPH. 35 MPH.

400 and 600 Series45 MPH. 45 MPH.

No. 52560 MPH. 60 MPH.

100, 700, and 800 Series60 MPH. 60 MPH.

Nos. 500, 501 and 552-555 incl.....65 MPH. 65 MPH.

5400 and 6000 Series.....65 MPH. 65 MPH.

Nos. 550-55175 MPH. 65 MPH.

6500 and 6600 Series75 MPH. 65 MPH.

Diesel-electric and gas-electric motor cars, in service or being towed—

Cars B-3, B-12 and B-1355 MPH.

Cars B-6, B-11, and B-14 to B-26 incl.65 MPH.

Coming from shops, under steam, to prevent running hot:

All A and Q and classes Z-6, Z-7 and Z-850 MPH.

S-4, T, T-1, W to W-5 inc., Y-2 and Z-535 MPH.

Y, Y-1, Y-330 MPH.

Z-3, Z-425 MPH.

Main Line—With main and side rods removed:

All A and Q and classes Z-6, Z-7 and Z-830 MPH.

Z-5, S-4, T, T-1, W to W-5, inc., Y to Y-3 inc.....25 MPH.

Z-3, Z-420 MPH.

With main rods removed and side rods in place:

All A and Q and classes Z-6, Z-7 and Z-8.....35 MPH.

Z-5, S-4, T, T-1, W to W-5 inc., Y to Y-3 inc.....30 MPH.

Z-3, Z-425 MPH.

Branch Lines—With either or both main and side rods removed:

All A and Q classes25 MPH.

All other classes20 MPH.

On bridges—With either or both main and side rods removed:

Steam switch engines, without engine trucks15 MPH.

Other engines20 MPH.

In the event the above speeds are in excess of 50% of the permissible speed for operating the engine in working order over any bridge carrying speed restrictions, speed on such bridges shall be 50% of the permissible speed for engine in working order.

Dead engines going to shops or being transferred from one district to another with all rods up or in place, the piston rod parted from the crosshead and removed and the valve motion disconnected and blocked, may be moved in trains at not to exceed the permissible speed of freight trains operating in the territory over which the engines are to be moved, or the operating speed restriction for track or bridges for that class of engine, whichever is the lower.

Engines handled in this manner when coming from shops must not exceed the operating speeds specified for engines coming from shops under steam.

Diesel-electric engines may be handled dead in trains at not to exceed the authorized operating speed specified for such engines.

Bridge or other restrictions must be observed for these engines the same as when in operating condition.

2. Single and Double Headers; operation—track and bridges—general.

Where there are no governing restrictions specified for double-headers in the special instructions for each subdivision, they will be governed by the most restrictive instructions applicable to a single engine when of the same class and to the heavier engine when of different classes.

Where doubleheader restrictions are specified, doubleheaders of different classes of engines will be governed by the restrictions applicable to doubleheaders of the heavier class.

When necessary to doublehead a diesel-electric engine with a steam engine, except in case of emergency, the steam engine must be placed behind the diesel engine.

When handling diesel-electric single unit road switcher or switch engines dead in freight trains, they shall be separated from the road engine and each other by at least one freight car. This does not apply to diesel-electric engines of two or more units.

Diesel engines—Except as otherwise provided, diesel-electric engines specified in Item 1 may be operated over bridges under the same restrictions shown for Class T engines.

To avoid possibility of fire or damage to traction motors, diesel-electric engines must not be permitted to pass over or to stand on cinder pits containing live fire or hot cinders.

Under no circumstances should diesel-electric engines pass through water which is deep enough to touch the bottom of the traction motor frame. When passing through water, movement must always be at very slow speed (2 to 3 MPH).

Where diesel-electric multiple-unit engines are used to handle main line through passenger trains making few or no stops, the fireman will remain in the cab at all times while the train is in motion.

Where multiple-unit diesel-electric engines are used in freight service, both the fireman and the head brakeman shall not be absent at the same time from the leading cab while the train is under way on main track between stations.

Wrecking cranes—250 tons, 45 to 48 inc. must not be coupled directly to engine or tender of engines Classes A-2 to A-5 inc. or Z-5 to Z-8 inc., but must be separated from them by at least two cars of not over 169,000 pounds total weight, for movement over bridges.

3. Use of Mars headlight on engines so equipped—
The Mars headlight can be displayed with either stationary or oscillating white light at the same time that the standard headlight is in use, but cannot be displayed with either stationary or oscillating red light when the standard headlight is in use.

The Mars white light may be used in a stationary position as a substitute headlight in case of failure of the standard headlight, but will normally be used as an oscillating light during the time full display of standard headlight is required.

The Mars oscillating red light will be used when head end protection is required, either by day or by night by engineer control, if the train becomes disabled or is stopped suddenly due to unusual occurrence with the possibility of an adjacent track being obstructed, or if it overruns the clearance point at a meeting or waiting point, or at the end of double track or at a junction, or in any other emergency situation.

The engineer of an approaching train, finding oscillating red light displayed, must stop and then be governed by conditions existing. If on an adjacent track which he finds unobstructed and safe for operation, he may proceed at restricted speed until the standing train displaying the oscillating red light has been passed.

The Mars red light shall be displayed in stationary position when a train is occupying the main track at a meeting point with an opposing train until the headlight of the opposing train has been dimmed, per Rule 17(B), after which the red headlight shall be extinguished, and the standard white headlight turned on dim until opposing train is into clear on siding.

The use of the red headlight does not in any manner relieve the train or enginemen of responsibility for compliance with the provisions of Rules 99 and 102.

4. Lights will not be displayed at night on train order signals on the 6th, 7th, 8th, 10th, 12th, 14th, 15th, 17th, 20th, 21st, 22nd, 23rd and 24th subdivisions.
Trains will be governed by the day indication of these train order signals.

5. Rule D-97 applies to all divisions.

6. Except in case of fog, storms, or otherwise bad weather, yellow signals may be used, without flagmen, when placed as prescribed by Rule 10(h) to indicate approach to a red signal on all subdivisions, except the 1st, 2nd and 3rd subdivisions, and also in special cases authorized by the Superintendent and protected by train order.

7. Rule 606: Emergency Signals are not used at interlockings or drawbridges operated by the Northern Pacific Railway.

8. Test of hand brakes of gas-electric or diesel-electric motor cars must be made once each trip. If crew has charge of moving car prior to leaving initial station, test will be made during such movement; otherwise as soon as possible after leaving initial station. On cars equipped with "Deadman's Control", conductor and engineer will cooperate in making test.

9. Cars will not be handled behind light-weight observation cars except in emergency or when so authorized by the Superintendent. In such cases passengers shall not be permitted to pass between such cars while train is in motion due to the unprotected opening.

Gas-electric or diesel-electric motor cars, when handled dead in freight trains, must be behind caboose.

4-wheel scale test cars and scale test car 251 must be handled only in local freight trains. All scale test cars must be placed immediately ahead of caboose.

Cranes or similar machines geared for self-propulsion moving on commercial billing, must not be handled in time freight trains.

When handling pile driver 25, it must be coupled to either the regular tender or a flat or gondola car with open end next to cab end of pile driver, to provide proper clearance.

Open cars loaded with material which may shift, such as poles, pipe, timbers, etc., shall not be placed immediately next to diesel-electric engines nor to cabooses in trains.

10. Precautions must be taken on double track to prevent accidents from swinging doors or other loose construction attached to cars or engines.

11. Electric Switch Locks—To operate the lock, unlock and open the door:

(a) If indicator shows proceed, turn lock handle to the left until it rests on stop block. Then line the switch in the usual manner and movement may be made at once.

(b) If indicator shows stop, and no conflicting train movement is evident, unlock the time release box and push the button which starts the time release. After three minutes indicator will normally show proceed, then turn the lock handle to the left and line the switch.

(c) After final movement over the switch is made:
Restore and lock switch in normal position.
Turn the electric lock handle to the right until it rests on the stop block.
Close and lock the door of the electric lock.

(d) Exception: If the electric lock is equipped with a wire seal emergency release, located at the left of the indicator, the seal must not be broken until after the time release has been operated and the electric lock fails to show proceed.

When emergency release is used, there must be a wait of three minutes before switch is lined for movement.

After emergency release seal has been broken, immediately notify the train dispatcher so he may call the signal maintainer to reset the emergency release, as the signals will remain at stop until repairs are made.

12. Spring Switches—

Unless otherwise specified, the normal position of spring switches is for the main track.

When the target of a spring switch shows red to an approaching train or engine a trailing point movement actuating the spring switch points must not be made.

Signal operation at spring switches equipped for switch key operation—

The normal indication of main track signal is Proceed. The normal indication of siding signal is Stop. To clear the siding signal when train is ready to enter main track, insert switch key in control box and turn to right. If route is clear the siding signal will immediately clear.

If siding signal does not clear by switch key operation, open release box and push the button which will put the time release mechanism into operation. After time release has operated, the siding signal will clear if there is no conflicting train movement.

The release box door must be left open until leading wheels of train on the siding have passed the siding signal, then close and lock the release box door. If the siding signal has been cleared and train on the siding is not ready to depart, if necessary to clear signals for a main track movement, open the release box door and push the button which will start the time release mechanism. After the time release mechanism has started to operate, close and lock the release box door.

When a train, light engine or any piece of equipment moves through a spring switch in such a manner as to throw the points, the conductor or a member of the crew shall observe if the signal governing movements in the opposite direction moves to the approach or the proceed position. If it remains in the stop position and there are no other train movements in evidence that would cause it to remain in that position, the dispatcher shall be notified from the nearest open telegraph office that the signal remained in the stop position and also, when practicable, the first opposing train cautioned.

10. Log Trains—

Trains handling logs, wood bolts, or veneer blocks, loaded on flat cars, will be governed by the following instructions:

Conductors must personally know that cars are not overloaded or improperly loaded and are safe to move without loss of lading, giving particular attention to permitted maximum width of load, 11 feet 6 inches, as per clearance tables.

Log flats loaded with logs will not be handled in trains unless logs are secured with two log binder cables or two heavy steel band straps.

Top or "peaker" logs will not be handled on log flat loads of thirteen or more logs in order that binders will bear on all outside logs instead of being held away from sides of logs by a top log.

Cars must not be accepted for movement when loaded to a height exceeding 13 feet above top of rail, except where height of not more than one log extends above 13 foot limit to a maximum height of not more than 14 feet above top of rail.

When necessary to cut cable binders, binders should be securely fastened to deck of car to avoid possibility of loose binders catching in switch points.

Lost logs must be reported and when they obstruct traffic or other tracks, or damage roadway, trains must be stopped and effort made to clear obstruction. Special precautions should be observed to avoid logs falling from cars when using overhead crossings and in all cases of obstructions, take prompt action to protect trains.

Eight foot logs loaded crosswise on gondola cars or wood racks must have side protection of wire mesh or boards per Fig. 21 of AAR loading Rules.

Double track:

Such trains must not meet or be passed by trains, except work trains, between stations on opposite track of double track; must be standing when passenger trains on opposite track meet or pass such train, and if practicable must be standing when freight trains are met, or passed on opposite track, but if not practicable will pull by standing freight trains at restricted speed. When meeting or passing work trains between stations, one train must, when practicable, be standing.

Conductors will notify Dispatcher when logs, wood bolts, or veneer blocks, loaded on flat cars are in their train, and secure train order that trains, except work trains, on opposite track will be held at next station until they have arrived.

Such trains during daylight hours must, when running between stations, have a trainman stationed on rear platform of caboose to watch for logs, wood bolts, or veneer blocks that may be lost from cars and obstruct opposite track and take prompt action to protect trains in case of obstruction.

Must not be handled in trains after dark, except as otherwise provided, in which case a trainman will be stationed on rear platform of caboose with lighted lantern or fusee, to watch for logs, wood bolts, or veneer blocks that may be lost from cars and obstruct opposite track and take prompt action to protect trains in case of obstruction.

Single Track—Such trains must be standing when meeting or being passed by passenger trains. When running, a trainman must be stationed on rear platform of caboose to watch for logs, wood bolts, or veneer blocks that may have fallen from cars.

These rules will not apply to logs, wood bolts, or veneer blocks loaded in gondola cars properly secured, staked and wired, or where no log extends more than one-half of its diameter above top of side rail of car.

14. Pusher engines must not push on cabooses not equipped with steel sills.

15. Bulletin Stations—

Yakima, Passenger Station, Yard Office, Round House.

Ellensburg, Cle Elum, Lester.

Auburn, Yard Office, Round House.

Seattle, South Portal Tower, Middle Yard, Round House.

Tacoma, Union Station, Yard Office, Round House.

Centralia, Passenger Station, Yard Office, Round House.
Longview, Freight Station, Vancouver, Passenger Station.
Portland, Telegraph Office.

Woodinville. Everett, Yard Office, Round House.

Sumas, Enumclaw.

Bellingham, Telegraph Office, Round House.

Hoquiam, Passenger Station, Round House.

Aberdeen, Freight Office.

Elma, South Bend, Olympia, and Bangor Telegraph Offices.

16. Standard Time Clocks—

Yakima, Passenger Station, Yard Office.

Ellensburg, Cle Elum, Lester.

Auburn Yard Office, Round House.

Seattle, South Portal Tower, Middle Yard Office, Round House.

Tacoma, Union Station, Yard Office, Round House.

Centralia, Passenger Station, Yard Office, Round House.

Longview, Freight Station; Vancouver, Passenger Station.

Portland, Telegraph Office.

Everett, Bellingham, Hoquiam, Telegraph Office.

Elma, Telegraph Office; Bangor, Telegraph Office.

17. Watch Inspectors—

Yakima—Carson and Stedman, Ellensburg—Charles E. Dickson.

Cle Elum—Morrow Jewellers.

Auburn—Donald A. Nelson.

Seattle—R. A. McReynolds, Ben Tipp, Bob Cline, Center Jewelry Co., Richard's Jewelry.

Tacoma—Mierows, 1105 Broadway, A. G. Paulson.

Centralia—Salewsky Jewelers, Vancouver—W. L. Runyon.

Portland—Roy and Molin, 316 S. W. Alder St.

Everett—Oscar P. Nelson, Merryfield Jewelry Co.

Snohomish—S. V. Willight.

Arlington—E. H. Richter.

Bellingham—Erving H. Easton.

Sumas—Henrickson Jewelry Company.

Aberdeen—Hansmans Jewelry Co.

Hoquiam—Carl Kneipp, Fred Wetzel.

Olympia—LeRoy Jewelers, Shelton—J. C. Beckwith.

Bremerton—V. Swanson: South Bend—H. Holte.

Raymond—Roys Watch Repair Shop.

Sumner—Sumner Jewelry.

FIRST SUBDIVISION.

(MAIN LINE)

1. Speed Restrictions—

Zone—Between	Maximum Speeds Permitted	
	Freight and Mixed	Passenger
Yakima and MP 16 (Kountze)	50	70
MP 16 and MP 38 (Easton)	50	75
Easton and Cabin Creek	50	60
Cabin Creek and Martin, in either direction	20	30
Descending against the current of traffic....	20	25
Through Stampede Tunnel No. 3	30	30
Stampede Tunnel No. 3 and Lester, in either direction	20	30
Descending against the current of traffic....	20	25
Lester and MP 82 (Kanaskat)	50	60
MP 82 and MP 101 (east of East Auburn)	50	70
MP 101 and MP 103 (East Auburn)	50	60
Engines Class Z-5—Maximum speed permitted.....	35 MPH.	
Between Pomona and Thrall and between Lester and Kanaskat the Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.		

Approach Ellensburg and Yakima passenger stations at restricted speed.

All eastward trains approach Lester and all westward trains approach Easton and East Auburn at restricted speed expecting to find main track occupied.

At Yakima—over Yakima Ave., B, C, and D streets.....20 MPH.
At Cle Elum—over important public crossings25 MPH.

See also Mountain Grade Operation.

2. **Bridge and Engine Restrictions**—Engines classes A-2 to A-5 inc. and Z-5 to Z-8 inc., not permitted west of Easton, except as authorized by superintendent. Double heading of these engines not permitted.

Bridges 74 and 75, 78, 78.1 and 79, between Eagle Gorge and Palmer Jct., 81, between Palmer Jct. and Kanaskat, 100, between Covington and East Auburn, all Green River:

Engines Class Z-3, double-headed20 MPH.
Engines Class Z-420 MPH.

At Ellensburg, Class A engines not permitted on house track beyond clearance point. Engines heavier than Class W5 not permitted on wye, and other engines turning on wye track must start movement via east leg and move slowly on curves.

At Holmes, engines classes Q-6 and W-3 and heavier not permitted on logging company tracks.

Engines Classes A-2 to A-5 inc., and Z-5 to Z-8 inc.:

Extra precautions must be taken when using station tracks to be sure of proper clearance and guard against accidents or injuries. When taking siding to meet or pass other trains, train and engine men must be sure that clearance is sufficient, and when possible, engine should be on straight track.

These engines not permitted on spur tracks at Yakima, Selah, Roza, Wymer, Umtanum, Holmes, Ellensburg spurs north of main track, Thorp, Bristol and Nelson. If necessary to handle cars on these tracks hold onto enough cars to avoid engine going on such tracks.

At Yakima, not permitted on yard tracks 6, 7, 8, 9, 10 and 11, or on tracks west of passenger station, except main track, highline No. 1 and old eastward siding.

At Thorp, two engines of these classes must not occupy lap switches simultaneously.

At Cle Elum, tracks 11 to 16 may be used if adjacent tracks are clear to insure proper clearance, otherwise when picking up or setting out cars hold onto enough cars so engine will not go beyond frog of lead switches.

3. **At Auburn**—First Subdivision trains handling logs on flat cars and entering yard on track paralleling westward second subdivision main track should stop and remain standing while train passing on main track.

Between Auburn and East Auburn: Automatic signal indications governing the use of main tracks between Auburn and west switch East Auburn supersede the superiority of trains. All train and engine movements between these points and also movements between East Auburn and Auburn Yard will be made subject to signal indications. Freight trains, yard engines and light engines moving within these limits must avoid delay to first-class trains and passenger extras.

Eastward second subdivision trains will be governed by the top light of signal 213: Eastward trains from second to first subdivision will be governed by lower light of signal 213. Westward trains from first subdivision, entering second subdivision westward main track, will be governed by top light of westward interlocking signal located 309 feet east of first subdivision junction switch and westward trains from first subdivision moving through crossover to second subdivision eastward main track will be governed by lower light of this signal. All switches connected with these movements must be properly lined before signal will indicate "proceed".

Eastward trains moving from Auburn Yard on outbound track to first subdivision main track, will be governed by dwarf signal near junction switch. Trains using this track, enter the track circuit approximately 500 feet before reaching this signal and, when occupying track circuit, will set signals against movements in either direction on main track between Auburn and East Au-

burn. These signals may be cleared by opening knife switch located inside of metal case at dwarf signal. This knife switch must be returned to closed position after being used.

Eastward trains, moving from Auburn Yard on inbound track to first subdivision main track, will be governed by dwarf signal near junction switch. Trains or engines will stop at this signal and, before lining main track switch, a member of crew must observe switch indicator, which will show "proceed" if main track is unoccupied between Auburn and East Auburn. If switch indicator shows "proceed", main track switch may be opened and dwarf signal will show "proceed" if route is clear.

At Auburn, westward trains or engines on second subdivision westward main track, awaiting arrival or departure of trains to or from first subdivision, must remain east of westward interlocking signal, located on westward main track about 500 feet east of first subdivision junction switch.

Trains or engines will not pass westward interlocking signal located 309 feet east of first subdivision junction switch in "stop" position except under protection of flag against first-class trains. Eastward second subdivision trains or engines, using crossover to first subdivision, will not pass signal 213 if lower light indicates "stop" except under protection of flag against first-class trains. If signals indicate "proceed", movements may be made without flag protection.

At Auburn, Second Subdivision instructions govern.

4. **At East Auburn**, unless required to take siding, through first class trains having transfer to make will hold main track, and trains handling Tacoma connections will use transfer track north of main track while transferring. Telltales are located on main track at each end of transfer platform to call attention to restricted clearance of umbrella shed.
5. **At Palmer Jct.**—Trains from 7th Subdivision must not pass Stop signal to enter 1st Subdivision if signal indicates stop, except under protection of flag against first class trains. If signal indicates proceed, movement may be made without flag protection.
6. **Between Kanaskat and Lester** all toilets in trains must be kept locked and employees are cautioned against throwing off refuse or articles which might become unsanitary. Supply of cards warning passengers that train is operating thru Green River watershed is kept in locker in each end of coaches. Before locking toilet doors trainmen will display warning cards on the doors sufficiently in advance to notify passengers of this requirement.
7. **At Martin**—Westward passenger trains must not enter Tunnel No. 3 until tunnel has been cleared of smoke.
8. **At Easton**—Normal position of switch leading from east end of west No. 2 track to eastward main track is for west No. 2 track and must be left lined for No. 2 track when not in use.
9. **At Cle Elum**—Electric coal bunker, on westward siding, will not clear man on side of car or engine. Logs will not be handled on this track. Switch on west leg of wye leading to coal dock track must be left lined for coal dock track.
10. **At Ellensburg**—All train, engine and car movements over Fifth Street Crossing, on Auxiliary Tracks, must be preceded by trainmen. Conductors of passenger trains relieved at Ellensburg by another conductor will be governed by Rule 220 in delivering orders to the relieving conductor. Normal position of switch to old caboose track will be for that track, to serve as a derail in event of cars running out of yard. Main track switch has been equipped with "Attend to derail" sign, and target of caboose track switch will display yellow indication when in normal position.
11. **At Yakima**—Freight Trains arriving Yakima freight yard will be secured by setting not less than six (6) hand brakes on head end of eastward, and on rear end of westward trains.

Similar precautions must be observed while trains are being made up, the hand brakes to be applied until after engine is coupled to train and train air brake system is effective.

Time of first class trains and passenger extras applies at passenger station. These trains taking siding will use high-line pocket unless otherwise instructed. Unless otherwise provided, time specified for other westward extra trains applies at yard office.

All yard tracks crossing Meade Avenue are connected with the crossing signals and when it is necessary to cut eastward trains for Meade Avenue, make certain cars are left clear of the insulated joints, which are approximately 100 feet each side of Meade Avenue.

To avoid blocking street crossings, westward trains with more than 65 cars will not leave the east yard, when meeting trains, until the eastward train arrives.

Flagman must precede cars shoved or engines backing over Yakima Avenue crossing in addition to crossing watchman protection.

Normal position of switch leading to siding extending between east end of Yakima Yard and Union Gap is for siding. Switch to spur track leading off this siding, located 200 feet east of west switch of siding, must be left lined and locked for spur track when not in use to act as a derail for all yard tracks.

12. Sidings—

Cle Elum: No. 6 track between crossover opposite passenger station and first crossover east is eastward siding. Track between crossover west of coal dock to extreme west switch, on north side, is westward siding.

Thorp: North siding is eastward, south siding is westward.

Ellensburg: When passenger trains meet at Ellensburg, the train required to take siding will use City track. When otherwise instructed, and for other trains, No. 1 track in east yard (east of Fifth Street) will be used as westward siding, and No. 1 track in west yard (west of Fifth Street) will be used as eastward siding. The normal position of switches of connecting track between west No. 1 and east No. 1 tracks is for the connecting track and must be left in normal position after being used.

Thral: North siding is eastward, south siding is westward.

Pomona: North siding is eastward, south siding is westward.

Selah: South siding is eastward, north siding is westward.

13. Switches Equipped with Electric Switch Locks:

At Palmer Jct., switch leading to 7th Subdivision equipped with emergency release.

At Auburn, the junction switch leading to 2nd Subdivision and the switches at both ends of the first crossover east of the passenger station.

14. Spring and Dual Control Switches—

Spring switch equipped with facing point lock, between East Auburn and Auburn, where outbound wye track from Auburn yard connects with main track.

Spring switches equipped with facing point locks and for switch key signal operation:

At Covington, east end of siding.

At Ravensdale, east end of siding.

At Kanaskat, east end of siding.

At Eagle Gorge, east end of siding.

At Maywood, east end of siding.

At Nelson, west end of siding.

Dual control switches—At Easton and Lester, switches at end of double track, normal position for westward track are dual control and electrically operated with remote control by operator.

15. Logs—Westward trains handling logs between Lester and Auburn, will stop at Eagle Gorge for inspection of logs.

Logs, wood bolts, or veneer blocks, loaded on flat cars, will not be handled through Stampede Tunnel, between Martin and Stampede, nor after dark, west of Lester.

16. Both tracks between Lester and Stampede and between Martin and Easton are signalled for movements in both directions. At Kennedy, crossover movement from eastward to westward track is governed by lower arm of signal at east end of crossover. Crossover movement from westward to eastward track is governed by lower arm of signal at west end of crossover. When both switches of crossover are open, lower arm of signal governing the movement may display indications 601 A, 601 F or 601 G.

17. **Staff Block System Between Stampede and Martin**—No train, engine, self-propelled car or machine, or track car, will run in either direction until engineer or car operator receives from telegraph operator a staff, which must be retained until delivered to the operator at the opposite end of the block when movement is through the block, or to operator at starting point when movement is part way through the block and return. On trains handling rotaries, staff will be delivered to engineer handling the air. The possession of the staff makes the train superior to all other trains between the double track clearance point at Stampede and the double track clearance point at Martin, which is designated as the Tunnel Section.

Under no circumstances may a staff be delivered to a train without having first been passed through the staff machine, or before operator delivering staff ascertains from operator at opposite end of Tunnel Section that switches to be used are properly lined. In case of break-in-two or doubling, engineer must retain staff until entire train is clear of Tunnel Section, and when necessary for another train or engine to enter the Tunnel Section to assist, it must be done under flag protection.

Light engines may be given the staff at either Martin or Stampede when preceding train is standing at opposite end of Tunnel Section clear of the double track switch, after switch has been lined for a track other than the one occupied, but must not be allowed to follow a train on main track from Martin until such train has passed the signal bridge at east end of siding and must not be allowed to follow a train on main track from Stampede until such train has passed the signals at west end of westward siding.

After being cut off trains, helper engines must remain clear of main tracks until ready to depart. At Martin helper engines standing on eastward siding must avoid obstructing the view of the train order signal by westward trains.

The eastward train order signal at Stampede and the westward train order signal at Martin are interlocked with the staff machines in those offices. The normal indication of these train order signals is stop and may be changed to indicate proceed for delivery of staff only, or to a "19 order signal" when staff, train orders and clearance are to be delivered but only after the operator at the opposite end of the block has returned the staff to the machine, which must not be done until the rear of the train leaving Tunnel Section has passed a point 300 feet beyond the train order signal. The train order signal must be restored to stop position immediately after the rear of train entering the Tunnel Section has passed the signal. Except for light engine movements, or in case of emergency when authorized by train dispatcher, a staff must not be issued to any train at Martin until preceding train is clear of the main track to be used between the double track switch at Stampede and the westward automatic block signals at west end of westward siding nor to any train at Stampede until preceding train is clear of the main track to be used between the double track switch at Martin and the eastward automatic block signals on the signal bridge at east end of siding.

To use the switches at Stampede section house, the staff must be used to unlock switch levers, and levers must be returned to normal position before staff can be removed. These tracks must not be used by trains or engines for meeting or passing trains and the staff which is used for unlocking the switches must be returned to the machine at Stampede or Martin. Pusher staff will not unlock switches.

When helper engine is used behind caboose or on rear of passenger train and is to be cut off at Stampede section house, operator at Stampede will deliver pusher staff to such helper engineer. This pusher staff will be authority to return to Stampede and can only be put into the machine at Stampede.

In Tunnel Section, protection by flag is not required and headlight must be used and marker lamps lighted both day and night. Outside of Tunnel Section, Rule 99 must be observed.

Where automatic block signals are located within Tunnel Section, these special instructions do not modify or supersede Automatic Block Signal Rules.

Should staff system become inoperative, trains will be handled through Tunnel Section on authority of train orders and staff system must not be returned to service without authority of the train dispatcher.

18. Mountain Grade Operation—

Mountain grade between Easton and Lester.

- (a) Rules governing operation of trains under Form D-R train order are modified to permit making train order meeting point between opposing trains on the eastward track between Lester and Stampede and on the westward track between Easton and Martin.

At meeting points established by train orders: The train order must specify which train will take siding.

Unless otherwise directed the ascending train will take the siding. Descending freight or mixed trains holding main track at the meeting point must not pass the upper switch of the siding until the ascending train is clear of the main track.

- (b) Westward trains, except passenger trains, must be held at Stampede while a preceding passenger train is occupying the track to be used between Stampede and Lester.

As soon as a westward passenger train has cleared the circuit, the Operator at Stampede must open the circuit switch and set at stop the westward automatic signal governing the track to be used at the west end of the siding.

After the passenger train has been reported clear of the track to be used at Kennedy, or arrived at Lester, the circuit switch at Stampede will be closed, allowing the signal to operate automatically.

Eastward trains, except passenger trains, must be held at Martin while a preceding passenger train is occupying the track to be used between Martin and Easton.

As soon as an eastward passenger train has cleared the circuit, the Operator at Martin must open the circuit switch and set at stop the eastward automatic signal governing the track to be used on the signal bridge at the east end of the siding.

After the passenger train has arrived at Easton, the circuit switch at Martin will be closed, allowing the signal to operate automatically.

Westward trains, except passenger trains using eastward track Stampede to crossover at Kennedy or through to Lester must not be permitted to meet ascending passenger train on eastward track at Kennedy.

Eastward trains, except passenger trains, using westward track Martin to Easton must not be permitted to meet ascending passenger train on westward track at Upham.

An exception may be made to the above four paragraphs when authorized by the train dispatcher and under favorable weather conditions, for the movement of light engines and of light tonnage trains not exceeding the engine rating on ascending grade.

(c) Helper Engines—

Diesel-Electric engines in helper or pusher service—

When diesel-electric engines are used in helper service in freight or mixed trains of approximate full tonnage rating, the diesel-electric helper engine will be placed ahead of approximately 40% of the train tonnage, unless otherwise instructed.

When diesel-electric helper is used the dynamic brakes should be used on all diesel-electric engines when descending grades.

Speed of freight trains at exit of Tunnel No. 3 should be controlled by use of dynamic brake on leading engine when so equipped. The dynamic brake lever on helper engine should be operated to increase the braking force as rear portion of train reaches the steeper grade after leaving Tunnel No. 3, and its use gradually increased to its full capacity as needs indicate to enable control of speed as required.

The application of the air brakes on helper engine when dynamic braking is used must be prevented by use of release position of the independent brake valve during time of application of train brakes by engineer on leading engine.

Steam engines in freight helper service—

Except in emergency not more than one helper engine will be used in service behind caboose.

When trains have more than one caboose, either deadhead or occupied, on rear of train, and/or cars of insufficient strength to withstand push of helper, all such cars and all cabooses will be placed behind helper. When such trains require two helpers, second helper will be cut in not less than fifteen (15) cars ahead of the rear helper.

On all other freight trains when one helper is required it will be placed behind caboose. When two helpers are required, second helper will be cut in ahead of caboose.

Detaching helper engines from behind caboose on freight trains at Martin and Stampede:

Engines pushing freight trains between Lester and Easton may be cut off while moving providing the caboose is equipped with vented angle cock and has an operating rod for use by trainmen in closing angle cocks and uncoupling air hose between caboose and helper engine, handled at rear of caboose, on freight train. In using this rod to close angle cocks, the angle cock on the helper engine must be closed before closing angle cock on the caboose, to prevent possible application of brakes on helper engine due to air vent in angle cock on caboose. If caboose is not equipped with these special devices, the train will stop at Martin or Stampede section house to permit trainmen to close angle cocks and uncouple air hose.

Conductor will personally see that coupling pin is lifted on caboose and that signal is given to engineer of helper engine, who will allow slack to run out gradually. After separating from the caboose the helper engine must be stopped promptly.

When a diesel-electric engine is used as helper on passenger train, it must be placed on head end of train.

When a steam engine is used as helper on passenger train, it must be placed on rear of train and cut off at Stampede westward and Martin eastward.

If two helpers are required on passenger train, instructions as to placing of such helpers must be secured from dispatcher.

In cutting out Helpers at Martin and Stampede N. P. Air Brake Rule 38, and Air Brake Rules 11 to 11-M, page 58 of Air Brake Instruction Book No. 1, must be complied with. When freight trains stop at Martin, eastward, or Stampede, westward, the following will govern:

Trainmen will be relieved of the running inspection of train as prescribed by Rule 812 when departing from Martin, eastward, or Stampede, westward. The brakemen will be at their respective positions on engine and caboose when train is ready to start, and enginemen must wait at least five minutes after making brake pipe test to allow retainers to "blow down" and for trainmen to make inspection of train while standing at these points for possible defects of running gear, brake and draft rigging, hot journals, etc.

- (d) Sidings between Tunnel No. 3 and westward switches of sidings west of Tunnel No. 4 will be considered in Stampede station limits.
- (e) Normal position of double track switches at Stampede will be for westward trains and at Martin for eastward trains.
- (f) Operators at Martin and Stampede are responsible for the position of the double track switches, and the siding switches adjacent to the Telegraph Office in connection with through train movements only.
- (g) Eastward freight and mixed trains will stop at Lester for terminal test of brakes and turning up handles of retaining valves, and at Easton to turn handles down, cool wheels, and inspect train.

On these trains handled by steam engines at head end, retaining valve handles will be turned up as follows:

On trains of all loads, or when the number of empty cars in train is less than one-fifth (20%), turn handles up on three-fourths (75%) of cars in train beginning with head car.

On trains of loads and empties, having more than one-fifth (20%) empties, turn handles up on one-half (50%) of the cars in the train beginning with head car.

On trains of all empties, turn handles up on one-fourth (25%) of the cars beginning with head car.

On these eastward freight trains handled by diesel-electric engines at head end and diesel helper located back in train, use no retaining valves when dynamic brakes are operative on all engines.

On these trains handled with one diesel, having more than 2250 tons, turn handles up on fifteen (15) cars beginning with head car.

On trains handled with one diesel, having 2250 tons or less, use no retaining valves. On these trains the stop at Easton will not be required for turning down retaining valve handles, cooling wheels and inspecting train.

- (h) Westward freight and mixed trains will stop at Easton for terminal test of brakes and turning up handles of retaining valves, and at Lester to turn handles down, cool wheels and inspect train.

On these trains handled by steam engines at head end, retaining valve handles will be turned up as follows:

On trains of all loads, turn handles up on all cars in train.

On trains of loads and empties, turn handles up on all of the loaded cars and on one-third (33 1/3 %) of the empty cars, beginning with head car.

On trains of all empties, turn handles up on one-fourth (25%) of the cars beginning with head car.

Westward freight trains requiring water at Lester will stop east of crossover, cut off engine, and while water is being taken, retainers will be turned down.

- (h-1) On these trains handled by diesel-electric engines at head end only, retaining valve handles will be turned up as follows:

On trains of all loads having 65 or more tons per operative brake, turn handles up on all retaining valves.

On trains of all loads having less than 65 tons per operative brake, turn handles up on three-fourths (75%) of the cars beginning with head car.

On trains of loads and empties turn handles up on three-fourths (75%) of the loaded and one-fourth (25%) of the empty cars beginning with head car.

On trains of all empties having in excess of 2250 tons, turn handles up on twenty (20) cars beginning with head car.

On trains of all empties having 2250 tons or less, use no retaining valves. On these trains the stop at Lester will not be required for turning down retaining valve handles, cooling of wheels, and inspection of train.

- (h-2) On these trains handled by diesel-electric engines at head end and diesel helper located back in train, use no retaining valves when dynamic brakes are operative on all engines.

- (h-3) In the event of failure of the dynamic brake feature on leading diesel-electric engine, or when proper control of speed indicates failure of dynamic brake feature on helper engine, the engineer on leading engine must take action promptly to stop the train by use of the train brakes and instruct head brakeman to notify conductor that retaining valve handles must be turned up on cars in train similar to the requirements specified in paragraphs (g) and (h) above for steam train operation. Conductor must instruct brakemen accordingly and notify engineer when the specified number of retaining valve handles have been turned up, after which train may proceed controlled by the air brakes.

- (i) Test of air brakes on freight or mixed trains as prescribed by Air Brake Rule 35 must be made at Lester on eastward trains and at Easton on westward trains.

- (i-1) On these trains the engineer will, after stopping the train properly, apply the brakes to the amount of a twenty pound reduction of brake pipe pressure; upon completion of the reduction sound whistle signal, one short blast.

- (i-2) Trainmen must not close angle cocks to detach engine until this signal is given. An examination of the train brakes must be made to determine if brakes are applied on each car. The

air pressure must not be coupled into the train from the helper or road engine, nor signal given engineer on road engine for a release of brakes until the examination has been completed. Conductors and engineers must fill out air test card before leaving Easton or Lester.

- (j) Engineer on leading diesel-electric engine will adjust the feed valve to 110 pounds brake pipe pressure for passenger trains and 90 pounds brake pipe pressure for freight trains at Easton on westward trains; at Lester on eastward trains. Conductor must observe caboose gauge before train enters Tunnel No. 3 and if sufficient pressure is not indicated, must take immediate action to stop the train.

- (k) Descending trains will carry 110 pounds brake pipe pressure for passenger trains and 90 pounds brake pipe pressure for freight trains to Lester and to Easton. Following any stops during the descent the engineer must fully recharge the brakes before starting. On freight trains the conductor must not give the "Proceed" signal until at least 80 pounds is shown by the caboose gauge.

- (m) If for any reason the train breaks in two or more parts while in Tunnel No. 3, train and enginemen should arrange to get engines out of tunnel as promptly as possible. If necessary, take engines and cars out in either or both directions. When portion of train is left in tunnel, same should be made secure by blocking and not moved out until smoke and gas have cleared and it can be done safely. Blocking will be found on walls of tunnel on right hand side going east, about 100 feet apart and six feet above the rail.

- (n) When stop is made at Easton, eastward, or Lester, westward, brake pipe pressure will be reduced to 80 pounds and continued at that pressure through to terminal. Conductor must know by caboose gauge that this has been done before proceeding.

- (n-1) When descending trains are recoupled following the cutting out of diesel helper engines at Easton or Lester, engineer on road engine will apply brakes on train to the amount of a service reduction of 25 pounds, readjust feed valve to 80 pounds, then place handle of automatic brake valve in running position.

- (o) Speed of trains through Stampede Tunnel No. 3 must be so controlled that they can be stopped on emerging. Trains handling express or expedited freight having a consist of cars equipped for passenger train operation, or with a small percentage of freight refrigerators intermingled, will be governed by speed specified for passenger trains descending mountain grades.

- (p) A vertical mounted alternating flashing white lunar signal is located 200 feet west of the west portal of Tunnel 3. This signal is approach lighted by eastward trains and is an indicator for the ventilating plant.

Eastward trains will not enter the tunnel unless they receive an alternating white flashing lunar signal. If the signal remains dark it indicates that the ventilating fans are operating and train must be stopped and ventilating plant engineer or operator at Stampede notified to stop the fans before proceeding into the tunnel.

- (q) Conductors in charge of freight trains handled by steam engines will wire operators at Martin or Stampede, as the case may be, when they have stockmen or messengers or any one legitimately carried on train in excess of regular train crew so that operators can hand up sufficient number of respirators.

Gas masks and pulmotors are maintained at telegraph offices at Martin and Stampede.

19. Ventilating Plant at Tunnel No. 3 will be operated as follows: Westward trains: Both fans will be operated for twelve minutes after rear end of train passes ventilating plant.

Eastward trains: Both fans will be started five minutes after eastward passenger trains or helpers pass ventilating plant and operated for twelve minutes.

Both fans will be started seven minutes after rear end of eastward freight trains pass ventilating plant and operated for twelve minutes.

EMERGENCY INSTRUCTIONS: If westward train does not pass ventilating plant within ten minutes after train is reported by Martin, both fans will be operated for twelve minutes, then one fan operated until train clears either at Stampede or Martin.

In case of work train working in Tunnel No. 3, instructions of man in charge of train will be followed. If twelve minute blow is not finished when another train is reported in tunnel from Stampede or Martin, fans will be stopped at once.

In case of a very strong east wind, it may be necessary to let wind clear tunnel, or operate fans two or three minutes extra.

20. **Helper District**—Between Easton and Lester.
21. **Pusher District**—Between Auburn and Lester.
22. **Yard Limits**—Track between yard limit signs east of Palmer Junction and West of Kanaskat operated as one yard.
23. **Register Stations**—
Yakima Passenger Station for first class trains and passenger extras.
Yakima yard office for second class and inferior trains except passenger extras.
Easton, Lester.
Auburn Yard—For trains originating and terminating and through trains running via yard track. This register will also show information of the arrival and departure of first class trains at Auburn.
24. **Register Exceptions**—At Lester and Easton, all trains will register by Form 608. At Easton, eastward through second class and inferior trains and at Lester, westward through trains will be furnished check of register Form 602 issued by the operator.
At Ellensburg train register in passenger station to be used by conductors whose trip starts or terminates there, information required by this form to be furnished for record purposes.
25. **Clearance Exceptions**—At Easton and Lester, all trains must secure clearance.
At Martin, all eastward trains must secure clearance.
At Stampede, all westward trains must secure clearance.
At Auburn Yard, all through trains running via yard tracks must secure clearance.

SECOND SUBDIVISION.

(MAIN LINE)

1. Speed Restrictions—	Maximum Speeds Permitted	
	Freight and Mixed	Passenger
Zone—Between		
MP 0 (Seattle) and MP 4 (east of Argo)	50	60
MP 4 and MP 36 (west of Reservation)....	50	75
MP 36 and MP 40 (Tacoma)	50	60
GN Engines Class Q-1, Nos. 2117, 2119, 2120, 2122 and 2128	50	50
Other GN Engines Classes Q-1 and Q-2	40	40
Classes O-4, O-5, N-3	50	50
At Black River Interlocking	40	60
At Reservation Interlocking	30	30
At Seattle: King St. Station, over switches		8 MPH.
King St. Station, entering tunnel tracks.....		10 MPH.
West of Holgate St., puzzle switches		10 MPH.
Between		
King St. and Argo, over all public crossings.....		20 MPH.
At Argo Interlocking		30 MPH.
At Puyallup within Corporate limits.....		30 MPH.
At Sumner, Kent and Auburn within corporate limits....		40 MPH.
except at Auburn all trains will approach junction switch and crossovers at east end of passenger station platform at restricted speed.		

All trains and engines using westward or eastward main tracks between the east switch of the Diagonal Wye and King Street Station move at restricted speed. Second class and inferior trains, or engines, may use main track with current of traffic within these limits on the time of delayed first class trains without train order authority, but must be prepared to protect im-

mediately. In foggy or obscure weather all trains must stop and know before proceeding that there are no trains approaching on main track before entering from yard track.

Trains and engines, moving east from Second Avenue Yard, will stop at a point 300 feet west of Puzzle Track Switch, just west of Holgate St.

All engines using West Seattle connection at Colorado Avenue, Seattle, will use every precaution when crossing the north and south strips of Spokane Street pavement, movement in both directions to be made at restricted speed.

At the point on East Marginal Way, Seattle, where West Seattle Line crosses the northbound traffic lane, vision of approaching motorists is obscured by a building. All trains and engines moving toward West Seattle, will come to a full stop short of northbound lane. A member of the crew will walk ahead and protect movement over crossing.

At First Ave., where the West Seattle line crosses, the view by southbound motorists is obscured by a building. Trains and engines moving eastward must not exceed two (2) MPH approaching this point, the whistle must be sounded and the bell ringing.

At Tacoma—
Reservation to East D Street, via Head of Bay Line.....30 MPH.

Between East D Street (Head of Bay Line) and U. P.
Jct., via passenger or freight tracks10 MPH.

Between 15th St. and 21st Street, sections of first class
trains using freight tracks instead of Union Station
tracksRestricted Speed.

On curves and over Drawbridge 39, between UP Crossing
on Drawbridge Line and 15th St. Tower.....15 MPH.

Between 15th St. Tower, The Union Station and East
D Street10 MPH.

Between Reservation and UP Crossing on Drawbridge Line—
All trains and enginesRestricted Speed.

Trains and engines approach East D Street, 21st Street South and 15th Street at restricted speed and proceed only on signal from switch tender. Westward trains may continue onto the freight tracks at 15th Street and may cross eastward main track to reach westward main track at 21st Street South on the time of delayed eastward first-class train on signal from switch tender. Signal will be given with green flag by day and green light by night. Yard engines entering or leaving Union Station tracks at 21st Street South via eastward main track will not cross westward freight track without signal from switch tender.

2. Bridge and Engine Restrictions—

Engines classes, NP, A-2 to A-5 inc. and Z-5 to Z-8 inc.; GN, R-1, R-2, not permitted.

On West Seattle Line, wrecking cranes 45 to 48 inc., not permitted.

Bridge 36.8 West Seattle line, over bascule span.....20 MPH.

Bridge 39, Tacoma Waterway, Drawbridge line.....15 MPH.
Engines Classes, GN, O-8, Q-1 and S-110 MPH.

Bridge 8.78, Tacoma Terminal, Dempsey Tide Flat Line:

NP engines classes Z-5 to Z-8 incl. not permitted.

NP engines classes A-2 to A-5 incl.....10 MPH.

NP engines classes A, A-1, W-3 and W-5.....20 MPH.

GN engines classes R-1, R-2 and heavier not permitted.

GN engines classes N-3, Q-1 and S-110 MPH.

UP engines numbers 800 to 834, 3500 to 3569, 3800 to 3839,
5000 to 5099, 5306 to 5313, 5500 to 5524,
7000 to 7099, all groups
inclusive10 MPH.

UP engines numbers 2906 and 3670 to 3674 incl.....20 MPH.

Trains handling logs, wood bolts, or veneer blocks, loaded on flat cars, will not exceed a speed of ten (10) MPH over the following bridges and when passing over them trainmen will be so sta-

tioned as to notice falling logs, wood bolts, or veneer blocks that might damage bridge and pass signal to engineer for quick stop. Engineer must be on lookout for such signal.

Bridge 29.1, Puyallup River, between Meeker and Sumner.
Bridge 24, Stuck River, between Dieringer and Auburn.
Bridge 17.2, Green River, between Thomas and Kent.

Flat cars loaded with logs, wood bolts, or veneer blocks in trains not permitted over Bridge 39, Tacoma Waterway, Drawbridge Line, except as authorized in emergency.

NP class A and GN class N3 engines, when switching or setting out on industry tracks, hold onto enough cars to avoid engine going on such tracks.

At Seattle, class A engines use westward main track moving from roundhouse to Second Ave. yard account sharp turnout on track No. 5.

At King Street, engines NP class A and GN class P and heavier, not permitted west of the boiler room crossing on stub track 5 account roof over the express building platform will not clear such engine cabs.

At Tacoma—Engines classes A and A-1 not permitted on outgoing roundhouse tracks 1, 2 or 3.

At Tacoma Union Station—NP class A and GN class P and heavier engines not permitted on curve at west end of track No. 1.

3. **Card train order Form AB** will govern the movement of trains and engines between Argo and Spokane Street Tower on Colorado Avenue Line and trains or engines must not move in this territory unless conductor and engineer each hold a copy properly filled out.

4. **At Seattle**—Trains or engines entering King Street Station from the east must not pass the fouling point of the trailing point crossover between eastward and westward main tracks located about 75 feet east of standpipe at east end of yard without proceed signal from the switch tender given with green flag by day or green light by night.

Trains or engines must not pass over Atlantic Street railroad crossings, Colorado Avenue line, unless they receive signal from crossing flagman with green flag by day and green light by night. One motion of regular proceed signal is for the NP, two for CMStP&P, three for the PC and four for the UP. When no crossing flagman is on duty trains and engines must flag across.

Trolley wires will not clear man on top of car at First Ave. South and Railroad Way; on West Seattle Line at Pioneer Sand and Gravel spur at Spokane St., and at Eleventh Ave., Southwest.

Sirens located about 500 feet west of Horton St. and about 500 feet east of Spokane St. with a red flasher light above and between main tracks at Horton St. Immediate action must be taken by crews of trains or engines to stop clear of this crossing, or if occupying same, to clear it promptly to avoid delay to fire equipment.

At Spokane Street Tower, following whistle signals to be used for interlocking routes.

To or from Argo2 long.
From West Seattle1 long, 1 short.
To West Seattle Line1 long, 1 short, 1 long.

5. **At Argo**—Following whistle signals to be used for interlocking routes:

Colorado Avenue Line: 1 long, 1 short, 1 long.
Shore Line: 2 short, 1 long.
Eastward to westward main track through crossover: 4 short.
Eastward main track to coal spur: 4 short.

Switch at west end of crossover just west of Argo and switch on westward main track leading to Oregon St. Transfer are electrically locked. To operate these, first communicate by phone with interlocking signalman, who will release the locks so they may be operated in accordance with instructions governing electric switch locks.

6. **At Black River Interlocking**—Trains entering the interlocking to back in on west leg of wye, or working interchange tracks, or

making reverse movement between Black River station and interchange track, should notify signalman by phone, so that arrangements can be made to protect movement.

7. **Westward trains** handling flat cars loaded with logs, wood bolts, or veneer blocks, must obtain train order authority and use eastward track between Black River and Argo.

8. **At Black River**—Trains from the 11th Subdivision must not pass stop signal to enter the 2nd Subdivision if signal indicates stop, except under protection of flag. If signal indicates proceed, movement may be made without flag protection.

In setting out cars on the west leg of wye cars must not be left between 2nd Subdivision west wye switch and road crossing approximately 765 feet from that switch in the direction of Renton.

9. **At Auburn**—

Westward trains or engines, on westward main track, awaiting arrival or departure of trains to or from first subdivision must remain east of interlocking signal located about 500 feet east of first subdivision junction switch.

Highway signals at Main Street crossing are not connected with house track and operate only with train movements on main tracks.

Trains moving to or from first subdivision will be governed by instructions in item 3, of first subdivision special instructions.

Normal position of switches leading from NP connection to H&R Yard is for Air Port Lead at east end and for H&R Lead at west end. These switches are equipped with NP switch locks and must be left lined and locked in normal position when not in use.

10. **At Meeker**—Trains from 7th Subdivision must not pass Stop signal to enter 2nd Subdivision if signal indicates stop, except under protection of flag against first class trains. If signal indicates proceed, movement may be made without flag protection.

11. **At Tacoma**—

15th Street Interlocking: Eastward interlocking signal located west of Drawbridge 39. Upper arm governs movement into Union Station. Lower arm governs movements to Fourth Subdivision.

Westward interlocking signal located just east of Pacific Ave. Upper arm governs movements on westward Fourth Subdivision main track. Lower arm governs movements to Drawbridge Line and also movements through pocket track to westward Fourth Subdivision main track.

Eastward interlocking signal, located opposite west switch of the crossover just west of Pacific Ave., governs movements on eastward Fourth Subdivision main track.

Following whistle signals to be used for interlocking routes:
Eastward trains via Drawbridge Line—

To Fourth Subdivision.....1 long, 1 short, 1 long.
To Union Station1 long, 4 short.

Westward trains from Fourth Subdivision—

To Moon Yard or Union Station1 short, 1 long.
To Drawbridge Line1 long, 1 short.

Color light home signal located on incline from Union Station: Upper light governs movement from Union Station to Fourth Subdivision. Lower light governs movement to Drawbridge Line.

No trains or engines will proceed from Union Station to Fourth Subdivision or Drawbridge Line when signal on incline is at Stop.

When ready to leave Union Station, push button must be operated to call for signal; two rings for Drawbridge Line, one ring for Fourth Subdivision.

When necessary to add helper to a train at 15th St. Tower, helper engine will move onto spur leading off eastward main track just west of Pacific Ave. and remain back of insulated joints until train to be helped has stopped. Switch to this spur is hand operated.

Trains on NP tracks will stop before reaching the CMStP&P overhead bridge at the west end of Tacoma Yard, if a train handling logs is passing overhead.

Trains and engines approach East D St., 21st St. South and 15th St., at restricted speed and proceed only on signal from switch-tender.

Eastward trains to, or westward trains from, freight tracks will not proceed beyond 21st St. South, located just west of Union Station, without proceed signal from switchtender.

Westward trains via freight track will call for desired route, immediately after engine passes overhead viaduct at 15th Street, by whistle signal:

Westward main track to Reservation1 long.
Crossover movement to Head of Bay Yard (NP)....4 short.

Eastward trains desiring to use freight track from 21st St. South, will call for route by1 long,
after engine passes East D Street, just east of NP roundhouse.

12. **At 15th St. Tower**—No train order signal maintained.

13. **Switches Equipped with Electric Switch Locks:**

At Argo, switch at west end of crossover and switch on westward main track, just west of Argo, leading to Oregon street transfer. Equipped with emergency release.

At Black River, the east wye switch to the 11th Subdivision and the west switch of the crossover between main tracks. Equipped with emergency release.

At Auburn, the junction switch leading to 1st Subdivision and the switches at both ends of the first crossover east of the passenger station. Not equipped with emergency release.

The west switch of the crossover between main tracks, located 750 feet west of MP 24—

The east and west switches of tracks leading off the eastward main track to H&R and stock yard tracks—

The east switch of main track crossover at MP 22—

The extreme east yard switch leading off westward main track—

Each of the three crossover switches on the "Inbound track", leading to westward main track, between MP 22 and 700 feet west of MP 22—

All equipped with emergency release.

At Meeker, the east switch of the crossover leading from the 7th Subdivision connection to westward main track and the west switch of the crossover between main tracks. Equipped with emergency release.

14. **Yard Limits**—Tracks between yard limit signs east of Argo and west of Fremont operated as one yard.

Tracks between yard limit signs west of Reservation and east of McCarver St., and South Tacoma operated as one yard.

15. **Register Stations**—Seattle (South Portal Tower), Middle Yard. Auburn Yard Office, for trains originating or terminating and for through trains running via yard tracks. Register at Auburn Yard will also show information of the arrival and departure of first class trains at Auburn.

Reservation for extra trains.

Tacoma Union Station for first class trains. Extra trains that originate, terminate, or change crews at Union Station or on freight tracks adjacent thereto.

Head of Bay Yard office for extra trains that originate, terminate, change crews, set out or pick up at Head of Bay Yard or at UP crossing on Drawbridge Line.

16. **Register Exceptions**—At Reservation, extra trains register by Form 608. At Tacoma Union Station, when conductors and engineers run through Tacoma on both second and third subdivisions, train 402, 404, 406, 408, 458 and 460 register by Form 608.

17. **Clearance Exceptions**—At Seattle, trains from Middle Yard secure clearance at Spokane St. Tower; trains from Second Avenue Yard at South Portal Tower.

At Auburn Yard, all through trains running via yard tracks must secure clearance.

At Meeker, trains originating must secure authority from dispatcher through operator at Puyallup, before entering second subdivision main track. Clearance will be issued at Puyallup.

At Reservation, westward extra trains will secure clearance.

Westward extra trains, except westward extra trains originating at Tacoma Union Station or changing crews at Tacoma Union Station or on freight tracks adjacent thereto, may run with the current of traffic to Reservation without clearance, but must secure clearance at Reservation for movement beyond.

Westward extra trains originating at Head of Bay or GN yards, must obtain authority from operator at Reservation before leaving yard.

At Tacoma Union Station, when conductors and engineers run through Tacoma on both Second and Third Subdivisions, trains 401, 403, 405, 407, 457 and 459 will not require clearance.

THIRD SUBDIVISION.

(MAIN LINE)

1. Speed Restrictions— Zone—Between	Maximum Speeds Permitted	
	Freight and Mixed	Passenger

Both tracks

Tacoma and Vancouver:

UP engines 3930-3999 inc. 50 60

Consolidation or MacArthur classes 40 40

MacArthur class, with drivers 63 inches or
over 50 55

GN engine class Q1, Nos. 2117, 2119, 2120,
2122 and 2128 50 50

Other class Q-1 and Q-2 engines 40 40

Classes O-4, O-5 and N-3 50 50

CMStP&P engines class C-5 50 50

Trains with helper engine NP class Z-3.... 25 25

Due to difference in curve elevation, westward trains, running against current of traffic on eastward track Napavine to Chehalis Jct., and eastward trains, running against current of traffic on westward track, Evaline to Vader, on curves 50 50

Eastward track

UP Jct. and McCarver St. 30 30

McCarver St. and MP 51 (east of Bucoda) 50 75

MP 51 and MP 59 (just east of Chehalis
Jct.) 50 60

except, Chehalis Jct. Interlocking 35 50

MP 59 and MP 136 (Vancouver) 50 75

Westward track

MP 136 (Vancouver) and MP 59 (just east
of Chehalis Jct.) 50 75

MP 59 and MP 51 (east of Bucoda)..... 50 60

except, Chehalis Jct. Interlocking 35 50

MP 51 and McCarver St. 50 75

McCarver St. and UP Jct. 30 30

At Tacoma—

Reservation to East D St. via Head of Bay Line.....30 MPH.

Between East D St., Head of Bay Line and UP Jct. via
passenger or freight tracks10 MPH.

Between 15th St. and 21st St. South, sections of first class trains
using freight tracks instead of Union Station tracks, move at
.....Restricted Speed.

Trains and engines approach East D St., 21st St. South and 15th St., at restricted speed and proceed only on signal from switch-tender.

Westward trains may continue onto the freight tracks at 15th Street and may cross eastward main track to reach westward main track at 21st Street South, on the time of delayed eastward first class trains on signal from switchtender.

Signal will be given with green flag by day and green light by night. Yard engines entering or leaving Union Station tracks at 21st St. South via eastward main track will not cross westward freight track without signal from switchtender.

At Titlow, over Sixth Ave. crossing	15 MPH.
Day Island crossing	25 MPH.
At Steilacoom, within corporate limits.....	50 MPH.
At Bucoda, within corporate limits.....	65 MPH.
At Centralia, within corporate limits.....	40 MPH.
At Chehalis, within corporate limits.....	40 MPH.
At Napavine, within corporate limits.....	50 MPH.
At Winlock, within corporate limits.....	50 MPH.
At Castle Rock, within corporate limits.....	40 MPH.
except 25 MPH passing mail crane for train to which mail is dispatched.	

At Kelso, within corporate limits.....40 MPH.
except 15 MPH over Allen street crossing.

At Kalama, within corporate limits.....40 MPH.

At Ridgefield, eastward trains from passenger station
and over Mill street.....50 MPH.
westward trains from point opposite switch of eastward siding
to and over Mill street.....35 MPH.

At Vancouver, eastward trains approach passenger station at re-
stricted speed.

At Portland, through interlocking at south end NPT Co. prop-
erty, and on depot yard tracks 6 MPH.

2. **Bridge and Engine Restrictions**—Engines N. P. Classes A-2 to
A-5 inc. and Z-5 to Z-8 inc., G. N. Classes R-1 and R-2, not per-
mitted.

NP Class A engines, UP engines 3930-3999 inc., and GN class
Q-1 engines will be operated only on main tracks, sidings, and
at:

Pioneer Pit, tracks 1 and 2,
Cascade Paper Co. spur,
Centralia, principal yard tracks, except tracks 10, 11, 12 and 13.
Chehalis, tracks 1 and 2.
Rocky Point, all tracks,
Longview Jct., all tracks,
Vancouver, tracks 2, 3 and 4.

At Tacoma, engines classes A and A-1 not permitted on out-
going roundhouse tracks 1, 2 or 3.

At Kalama, on Mountain Timber spur, engines heavier than NP
class W-3, UP class 7000 and GN class O-4 not permitted.

Bridge 0.59—Cowlitz River—Longview Line—
Over bascule span20 MPH.

Trains handling logs, wood bolts, or veneer blocks, loaded on
flat cars, must not exceed ten (10) MPH over the following
bridges, and when passing over them trainmen will be so sta-
tioned as to notice falling logs, wood bolts, or veneer blocks
that might damage bridge and pass signal to engineer for
quick stop. Engineer must be on lookout for such signal.

Bridge 47, Skookumchuck River, between Bucoda and Wabash.
“ 59, Newaukum River, between Chehalis Jct., and Napa-
vine.

“ 81, Cowlitz River, between Vader Jct., and Castle Rock.

“ 84, Toutle River, between Vader Jct., and Castle Rock.

“ 100, Coweman River, between Kelso and Longview Jct.

“ 105.1, Kalama River, between Longview Jct., and Kalama.

Flat cars loaded with logs, wood bolts, or veneer blocks must
not be handled in trains over,

Bridge 14, Chambers Creek Lift Bridge, between Titlow
and Steilacoom.

“ 119, Lewis River Drawbridge, between Woodland
and Ridgefield.

3. **Extra Trains**—Between Tenino Jct. and Tacoma, will run via
Third Subdivision unless otherwise instructed by train order.

4. **At Tacoma**—Eastward trains to, or westward trains from, freight
tracks will not proceed beyond 21st St. South, located just west
of Union Station, without proceed signal from switchtender.
Westward trains via freight track will call for desired route,
immediately after engine passes overhead viaduct at 15th Street,
by whistle signal:

Westward main track to Reservation1 long.
Crossover movement to Head of Bay yard NP4 short.

Eastward trains desiring to use freight track from 21st St.
South, will call for route by1 long,
after engine passes East D Street, just east of NP roundhouse.

Trains and yard engines will sound engine whistle signal ap-
proaching Sperry Mill just west of McCarver St.

5. **Nelson Bennett Tunnel**—Between McCarver St. and Titlow—
Headlight must be used and marker lamps lighted on all trains
passing through tunnel. Work trains and track cars must not
occupy tunnel without first securing permission from the train
dispatcher.

Rock loaded on flat cars must not be handled unless secured
on cars with side boards. Logs, wood bolts, or veneer blocks,
loaded on flat cars, must not be moved through tunnel.

6. **At Cascade Spur**, normal position of switch leading from set out
track to Cascade Paper tracks is for Paper tracks and must be
left in this position to serve as derail.

7. **At Nisqually**—Trains from Seventeenth Subdivision must not
pass stop signal to enter the Third Subdivision if signal indicates
stop, except under protection of flag against first class trains.
If signal indicates proceed, movement may be made without
flag protection.

8. **At Saint Clair**—Trains from the Sixteenth Subdivision must not
pass stop signal to enter the Third Subdivision if signal indi-
cates stop, except under protection of flag. If signal indicates
proceed, movement may be made without flag protection.

9. **At Tenino Junction**—Trains from the Fourth Subdivision must
not pass stop signal to enter the Third Subdivision if signal in-
dicates stop, except under protection of flag. If signal indicates
proceed, movement may be made without flag protection.

10. **At Centralia**—That portion of first track north of the westward
main track, west of the crossover at viaduct, will be used as a
westward siding. That portion of first track south of eastward
main track from west end of yard to crossover at viaduct will
be used as eastward siding. Engines must not be left on main
tracks while members of crews are eating.

Not more than one engine at a time will use Grays Harbor stub
track at west end of passenger station while crews are eating.
When this track is occupied, other engines may use house tracks
No. 1, 3 or team track.

11. **At Chehalis Junction**—When the Home Signal will not clear for
trains from the Twenty-first Subdivision before proceeding on
hand signals they must be sure there is no conflicting movement
evident on the CMStP&P tracks. The junction and crossover
switches must be operated by hand.

Trains crossing over from westward track to enter CMStP&P
will be governed by lower light of westward home signal.

12. **At Vader Junction**—Trains from LP&N must not pass stop
signal to enter eastward track, Third Subdivision, if signal
indicates stop, except under flag protection; if signal indicates
proceed, movement may be made without flag protection.

Trains crossing over from westward track to enter LP&N
track will be governed by lower arm on Signal 792. If signal in-
dicates stop, movement may be made under flag protection; if
signal indicates proceed, movement may be made without flag
protection.

13. **At Rocky Point**—First track north of main tracks will be used
as westward siding. First track south of main tracks will be
used as eastward siding.

14. **At Longview Junction**—Trains from Longview using west leg
of wye to enter Third Subdivision main tracks will not pass
stop signal if signal indicates stop, except under protection of
flag against first class trains. If signal indicates proceed, move-
ment may be made without protection.

Normal position of switch to the wye just east of Cowlitz River
Bridge is for the west leg of wye.

Normal position of tail track switch on east leg of wye is for
the tail track.

15. **At Longview**—Following whistle signals to be used for routes by trains or engines approaching Drawbridge 0.59 from East Yard:

To west leg of wye1 long.
To east leg of wye4 short.

16. **At Kalama**—Normal position of switch to Mountain Timber spur is for the spur.

Normal position of switch to Columbia Veneer spur is for the tail track.

17. **At Vancouver**—Junction switch at west end of Columbia River Bridge will be set for NP Main Track. Eastward trains stop before engine reaches fouling point between NP and SP&S tracks.

No train order signal maintained.

No. 1 track will be used as eastward siding.

18. **Switches Equipped with Electric Switch Locks:**

Nisqually, switch leading to 17th Subdivision and the west switch of crossover.

Saint Clair, switch leading to 16th Subdivision and the east switch of crossover. Electric locks have emergency release.

Tenino Jct., switch leading to 4th Subdivision and the west switch of crossover.

Chehalis Jct., switch leading to 21st Subdivision and the east switch of west crossover.

Vader Jct., switch from LP&N to eastward main track and the east switch of crossover.

Longview Jct., switch leading to west leg of wye and the east switch of crossover.

19. **Logs**—Flat cars loaded with logs, wood bolts or veneer blocks must not be handled in trains after dark except between Chehalis Junction and Centralia, and then only as provided under instructions for all subdivisions.

Trains handling logs, wood bolts or veneer blocks, loaded on flat cars, through Ostrander Tunnel, will stop before entering tunnel, where a careful inspection of such loads will be made and if found in good condition, train will pass through tunnel and stop; rear brakeman or flagman to follow through tunnel for purpose of inspecting track for fallen logs, wood bolts, or veneer blocks, and if found clear, will so report to conductor and train may proceed. Under conditions allowing for full view of tunnel, a trainman may ride on rear of train with lighted fusee, and if positive that track is clear and no logs have fallen, will give proceed signal after having passed through tunnel. The conductor of train will decide at time of stopping for inspection and be responsible for knowing that track is clear after passing through.

Log loading gauges have been placed at Ostrander Tunnel to show tunnel clearance; one on Eastward track, 1200 feet west of MP 93; and one on Westward track, 1800 feet east of MP 96. Gauges are placed in vertical position four feet, six and three-quarters inches from gauge side of outside rail.

Before pulling through this tunnel trains handling logs, wood bolts, or veneer blocks, loaded on flat cars, must have a trainman stationed at gauge to observe that such loads have proper tunnel clearance.

20. **Yard Limits**—Tracks between yard limit signs west of Reservation and east of McCarver St., and South Tacoma operated as one yard. Eastward extra trains originating at GN yard or at Head of Bay Yard will use freight track and enter double track at 11th St. Eastward extra trains originating at 15th St., or entering double track at 11th St., may run to McCarver St. ahead of delayed first-class trains without train order authority, avoiding delay to first-class trains, and must be prepared to protect immediately.

Tracks between Yard Limit signs east of Centralia and west of Wabash operated as one yard.

Tracks between Yard Limit signs east of Chehalis Jct. and west of Chehalis operated as one yard.

Track between Longview, East Yard and Longview Junction operated as one yard. At East Yard, normal position of switches will be for siding.

21. **Pusher District**—Between Centralia and Longview Jct. Engines pushing freight trains between Centralia and Longview Jct. may be cut off while moving providing the caboose is equipped with vented angle cock and has an operating rod for use by trainmen in closing angle cocks and uncoupling air hose between caboose and helper engine, handled at rear of caboose, on freight train. In using this rod to close angle cocks, the angle cock on the helper engine must be closed before closing angle cock on the caboose, to prevent possible application of brakes on helper engine due to air vent in angle cock on caboose.

22. **Register Stations**—

Tacoma, Union Station, for first class trains. Extra trains that originate, terminate, or change crews at Union Station or on freight tracks adjacent thereto.

Head of Bay Yard office for extra trains that originate, terminate, change crews, set out or pick up at Head of Bay Yard.

McCarver St., for extra trains.

Centralia.

Chehalis for 21st subdivision trains.

Longview Freight Station for trains originating and terminating.

Vancouver Telegraph Office, Portland Telegraph Office.

23. **Register Exceptions**—At Tacoma Union Station: When conductors and engineers run through Tacoma on both second and third subdivisions trains 401, 403, 405, 407, 457, and 459 register by Form 608.

At McCarver St., extra trains will register by Form 608.

At Chehalis: Second class and inferior trains to and from 21st subdivision register by Form 608 when operator on duty.

At Vancouver: All trains register by Form 608 and will be furnished check of register by train order, or register check Form 602, issued by operator.

24. **Clearance Exceptions**—At Tacoma Union Station, when conductors and engineers run through Tacoma on both second and third subdivisions, trains 402, 404, 406, 408, 458 and 460 will not require clearance.

Eastward extra trains, except extra trains originating at Tacoma Union Station, or changing crews at Tacoma Union Station or on freight tracks adjacent thereto, may run with the current of traffic to McCarver St. without clearance, but must secure clearance at McCarver St. for movement beyond.

At Tenino Jct., Longview and Vancouver Jct.: Trains originating will not require clearance.

At Centralia, all trains must secure clearance.

At Chehalis Jct.: NP trains originating will not require clearance.

25. **Derails**—At Winlock on east end of eastward siding 228 feet in from headblock.

Vader Jct. on LP&N connection, Vancouver Jct., on twenty-second subdivision main track, 200 ft. from junction switch.

At Kalama, on Port Dock track leading off the eastward siding, 150 feet in from head block.

FOURTH SUBDIVISION.

MAIN (PRAIRIE) LINE

1. Speed Restrictions—	Maximum Speeds Permitted	
	Freight	Passenger
Zone—Between	and Mixed	
Double and single tracks:		
15th St. Tower and Tenino Jct.	30	45
With helper engines, NP Class Z-3	25	25
GN engines Class Q-2	30	40
At Tacoma:		
Westward trains or engines approach Pacific Ave.		
at	Restricted Speed.	
Trains or engines entering or leaving Union Station,		
between 15th St. Tower and 21st South.....	10	10
At 15th St. Tower, while any portion of train is mov-		
ing over switches	10	10
Between Commerce St. and 15th St. Tower.....	6	6

Between Wilkeson St. and Commerce St., on descending grade:

Passenger trains	30 MPH.
Freight and mixed trains	20 MPH.
At South Tacoma, entering double track	15 MPH.
At McChord Field and Mobase—on Government tracks.....	10 MPH.
At Roy, over crossings within corporate limits	25 MPH.

See also Mountain Grade Operation.

2. Bridge and Engine Restrictions—

Engines, NP Classes A-2 to A-5 inc., Z-5 to Z-8 inc., GN Classes Q-1, R-1, and R-2, and UP engines, numbers 3930 to 3999 inc., not permitted.

Bridge 22-1, Nisqually River, between Roy and Yelm.

Engines, NP class Z-4; GN classes O-7, O-8, and UP engines, numbers 800 to 834, 3515 to 3564, 3600 to 3664, 4000 to 4019, 5000 to 5006, 5008 to 5054, 5056 to 5099, 5306 to 5313, 5500 to 5524, 7002, 8800 to 8809 and 9000 to 9087.....10 MPH.

Engines NP classes, A, A-1, W-3, W-5, and Z-3, Engines GN classes M-2, N-3, O-4, S-1, P-2, and Q-2 with 17,000 gallon tenders and

Engines UP numbers 2295 to 2310, 2906, 7000, 7001, 7003 to 7014 and 7016 to 7039.....20 MPH.
Trains handling logs 10 MPH.

Bridge 33, Des Chutes River, between Rainier and West Tenino, NP class Z-4, GN class S-1 and UP engines numbers, 3515 to 3564, 3600 to 3664, 4000 to 4019 and 9000 to 9087.....20 MPH.

Bridges 22.1 and 33:

Heavy Car Restrictions: Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent. Trains handling cars with total weight exceeding 169,000 pounds when coupled in groups or next to engine or tender....20 MPH.

If such cars are separated from each other and from engine or tender with one car 40 ft. long with total weight of not over 169,000 pounds, the speed restriction will not apply.

3. **Extra Trains**—Between Tenino Jct. and Tacoma, will run via Third Subdivision unless otherwise instructed by train order.
4. **At Tacoma**—Movements between Union Station, Drawbridge Line and Fourth Subdivision through 15th St. Interlocking, must be governed as provided for in item 11 of Second Subdivision.
5. **At 15th St. Tower**—No train order signal maintained.
6. **At South Tacoma**—Normal position of double track switch is for westward track.
7. **At Lakeview**—Normal position of the main track junction switch is for the Seventeenth Subdivision.
8. **At Mobase and McChord Field**—Train or engine movements over cantonment tracks must be made as prescribed by Rule 93. Toilets of cars must be kept locked and no refuse thrown from trains.
At Mobase: Permanent drainage ditch, about 3 feet deep and 1700 feet long in place between main track leading into cantonment and first track south, does not allow room to walk between these tracks.
On hospital spur at Mobase, trains must back in, as concrete wall and platform paralleling track on engineer's side will not clear engine or man on side of car.
9. **At Yelm**—Train or engine movements on siding or house track over highway crossings east and west of passenger station must be protected by trainman on ground.
10. **At Rainier**—South siding is eastward siding, north siding is westward siding.
11. **At Tenino Jct.**—Switch leading to Third Subdivision and west switch of crossover are electrically locked. See also item 9 of Third Subdivision.

Movements between clearance point between Third and Fourth Subdivisions and yard limit sign on Fourth Subdivision one mile west of Tenino Jct. must be made as prescribed by Rule 93.

12. **Logs**—Flat cars loaded with logs, wood bolts or veneer blocks may be handled in trains after dark between South Tacoma and Tacoma, as provided under instructions for all Subdivisions.

Trains handling logs will run via Half Moon yard pulling train in reverse order to Head of Bay yard.

13. **Mountain Grade**—Between 15th Street, Tacoma, and 2½ miles east.

At South Tacoma:

Terminal test of air brakes must be made on all freight or mixed trains before commencing the descent of mountain grade, record of test to be furnished on prescribed form, filled out by the conductor and engineer.

Air test card to be delivered to the operator or left in register box.

Descending trains will carry 90 pounds brake pipe pressure South Tacoma to Tacoma. Following any stops during the descent the engineer must fully recharge the brakes before starting and the conductor must not give proceed signal until at least 80 pounds is shown by the caboose gauge.

Immediately following departure from Lakeview engineer of westward freight trains will increase train line pressure to 90 pounds.

Retaining valve handles must be turned up on all loaded cars and on one-half the empty cars in mixed trains of loads and empties, using retaining valves on one-half the empties, beginning at the head end and alternating on every other car.

On trains of all empty cars the retaining valve handles must be turned up on fifty per cent of the cars beginning at the head car and alternating every other car.

These instructions do not apply to yard crews leaving Tacoma to perform switching on mountain grade and who do not go to South Tacoma, but are applicable to yard crews on westward movements from South Tacoma.

At Tacoma—Engineers on westward trains, after stopping west of 15th St. Tower to allow helper engine to be coupled on at rear of train, will leave train brakes applied with a 20-pound brake pipe reduction, then close the double-heading cock to brake valve. Helper engineer, after coupling is made, will release train brakes, following this by making the required brake pipe test before starting train movement to depot. At time of brake pipe test a member of the train crew must observe that brakes have applied on car next to road engine before signal to release brakes and proceed signal is given. Upon completion of stop made at depot, and leaving train brakes applied as required, the angle cocks on helper engine and next car will be closed and hose parted. Engineer on road engine will open double-heading cock to brake valve to release train brakes, following which a brake pipe test must be made before departure.

At Union Station—Engineers on eastward trains, after stop is made, will leave train brakes applied with a 20-pound brake pipe reduction, then close the double-heading cock to brake valve.

Helper engineer, after coupling to rear of train, will release train brakes, following which a brake pipe test must be made before departure. Train brakes will be under his control until stop is made west of 15th St. Tower and left applied with a 20-pound reduction before closing the double-heading cock to brake valve. Engineer on road engine will then open double-heading cock to brake valve, release train brakes, following which a brake pipe test must be made.

Automatic Signals 07 and 08 control the short piece of single track between Half Moon yard, Tacoma, and double track switch on Fourth subdivision. Trains or engines using cross-over to enter single track between these signals must do so expecting to find track occupied.

14. **Pusher District**—Between Tacoma and South Tacoma.

15. **Yard Limits**—Tracks between yard limit signs west of Reservation and east of McCarver St. and South Tacoma operated as one yard.

16. **Register Stations**—Tacoma, Union Station for first class trains. Extra trains that originate or terminate. Head of Bay Yard office for extra trains that originate, or terminate at Head of Bay Yard, or change crews at UP crossing on Drawbridge Line. 15th St. Tower. South Tacoma for Westward Trains.
17. **Register Exceptions**—At 15th St. Tower trains will register by Form 608, and will be furnished check of register by train order, or register check, Form 602, issued by operator.
18. **Clearance Exceptions**—At 15th St. Tower, eastward trains must secure clearance. At Lakeview, Train 423 will not require clearance if train order signal indicates proceed. At Tenino Jct., clearance not required.

FIFTH SUBDIVISION.

(SUMAS BRANCH.)

1. **Speed Restrictions**—
- | Zone—Between | Maximum Speeds Permitted |
|--|--------------------------|
| | All Trains |
| North Portal and Sumas | 30 MPH. |
| Except, | |
| Trains handling steam wrecking cranes, pile driver or locomotive crane | 25 MPH. |
| Advance-warning signs are located 1500 feet in advance of the Reduce speed signs. | |
| At Seattle—Between South Portal and Bay St. | 20 MPH. |
| At Interbay— | |
| Through crossover, 1000 feet east of station | 10 MPH. |
| Between Home signals of interlocking at GN Crossing of lead to Naval Supply Depot Spur | 20 MPH. |
| At University, approach public crossing just east of station at restricted speed, not exceeding 10 MPH over crossing and protecting all switch movements by flagman. | |
| Between Keith and Navalair Jct., approach public crossing on 65th Street at restricted speed. | |
2. **Bridge and Engine Restrictions**—
- Engines Classes A to A-5 inc. and Z-5 to Z-8. inc., not permitted. On Terry Ave. Line, wrecking cranes 45 to 48 inc., not permitted. Bridge 4, Lake Washington Canal, between Interbay and Fremont, over Bascule Span
- | | |
|--|---------|
| Bridge 61.1, Stillaguamish River between Arlington and Arlington Junction singleheader engines Classes Z-3 and Z-4 and double header Classes W-3 and W-5 | 20 MPH. |
| Double header Engines Classes Z-3 and Z-4, not permitted. | |
| Bridge 85, Skagit River, between Clear Lake and Sedro-Woolley, over draw span | 20 MPH. |
| Bridge 110, North Fork of Nooksack River between Acme and Deming, engines Classes W-3, W-5, Z-3, Z-4 | 10 MPH. |
| Classes Q-5 and Q-6 | 20 MPH. |
| Wrecking cranes 45 to 48 inc. | 15 MPH. |
- Heavy Car Restrictions:
- Cars exceeding 214,000 pounds not permitted except on authority of superintendent.
- Trains handling cars less than 30 ft. long with total weight exceeding 169,000 pounds, when coupled in groups, or next to engine or tender,
- | | |
|------------------------|---------|
| Over Bridge 61.1 | 20 MPH. |
| Over Bridge 110 | 10 MPH. |
- If such short cars are separated from each other and from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds, speed restriction will not apply.
- At Sedro-Woolley:
- Norlum Spur, engines heavier than class W-2, wrecking cranes 41 to 48 inc., and pile driver 25, not permitted.
- | | |
|-----------------------|---------|
| Lighter engines | 10 MPH. |
|-----------------------|---------|
3. **Card train order Form AB** will govern the movement of trains and engines between Lowell, Belt Yard and Everett and between Everett and GN Junction. Trains and engines must not move in this territory unless conductor and engineer each hold

a copy properly filled out, except yard engine movements within yard limits may be made subject to the provisions of Rule 93. N. P. eastward trains secure card train order at Delta Jct. authorizing movement from GN Junction to Everett and westward trains Everett to GN Jct. will deliver the card train order authorizing their movement to operator at Delta Jct.

4. **At Seattle, Interlocking at South Portal and King Street Passenger Station Tunnel Rules**—
- (a) Great Northern Interlocking Rules, as set forth in the Consolidated Code of Operating Rules and General Instructions (edition of 1945), supplemented by the following special instructions govern train and engine movements between North Portal and South Portal.
- (b) A positive block is maintained in both directions between these stations. Trains and engines may make a forward or backward movement within these limits, without flag protection, observing governing signal indications.
- (c) No train or engine will make a complete through movement between North Portal and South Portal against the current of traffic, or pass the governing home signal at the immediate entrance to the tunnel on either track displaying a Stop indication, except on the authority of a tunnel card properly Completed by signalman in charge and OK'd by the signalman at opposite station. When this governing home signal indicates stop, trains and engines, after stopping, must proceed at restricted speed to the next signal and be governed by its indication.
- (d) Tunnel cards shall be used as required; Form 26 for movement against the current of traffic from North Portal to South Portal, and Form 26A for movement against the current of traffic from South Portal to North Portal, and/or for passing the governing home signal at stop.
- (e) Tunnel card does not dispense with the observance of or compliance with the indications of southward home signals at the south end of the tunnel, governing entrance to South Portal interlocking, or the northward home signals governing entrance to North Portal interlocking.
- (f) At South Portal, trains and engines may enter the tunnel on either track for short switching movements if required. If the governing home signal at the immediate entrance to the tunnel displays a Stop-indication, a Tunnel Card must first be secured, as prescribed by Rules (c) and (d).
- (g) Maximum permissible speeds—
- | | |
|----------------------------------|---------|
| Against current of traffic | 10 MPH. |
| With current of traffic | 20 MPH. |
- (h) Operating directions are—North, from the south end of King Street Station through to North Portal, and South from North Portal through to south end of King Street Station.
- (i) Interlocking signal located at north entrance to the tunnel (controlled from South Portal) governing southward movements on southward track, displays indications in accordance with GN Rules 601-A, 601-C and 601-D.
- Green over red (601-C) route through South Portal interlocking to southward main track (tunnel track 4) properly lined.
- Red over yellow (601-D) diverging route through South Portal interlocking properly lined.
- These indications repeat the indications of the dwarf signal located at the south exit of the tunnel, governing southward movements to southward main track (tunnel track 4) and other tracks of King Street Passenger Station.
- Emergencies may arise which may cause a change in the indications of this dwarf signal after a southward train or engine has entered the tunnel and enginemen and trainmen must be on the alert to observe such change, which will be indicated by the display of a yellow light at the special approach signal, located in the tunnel about 1200 feet from the south exit.
- (j) An additional, special GN signal, located at north entrance to the tunnel and controlled from South Portal when indication is Yellow over Red, indicates the route through the South Portal interlocking is properly lined to the southward main track (tunnel track 4) but that this track southward from the interlocking limits is occupied and every precaution consistent with safety must be taken on emerging from the tunnel to avoid accident. This signal is to govern the movement of southward engines through the interlocking to their northward train made up on Tunnel track 4 at King St. station.

A dwarf type automatic block signal, GN Rules 501 A A (figure 9) and 501 B (figure 6) located at the south interlocking limits between tracks 3 and 4 governs southward train and engine movements on Track 4.

- (k) Dwarf signal located between northward and southward main tracks, at south end of King Street Station, governs northward movements on southward main track (tunnel track 4) and is controlled from South Portal interlocking. GN Rules 601-A and 601-E apply. When a train or engine is stopped by the Stop-indication of this signal, signalman must be informed of desire to make a northward movement on southward main track (tunnel track 4) by four operations of the push button located on top of the signal.

5. **At North Portal**—No train order signal maintained.

Interlocking and whistle signal indications:

Westward movements from King St. Tunnel are governed by a home signal located about 300 feet east of tower. Upper light governs route to GN main track; middle light governs route to NP main track; lower light governs diverging routes.

Westward movements against the current of traffic from the tunnel are governed by a dwarf signal located 300 feet east of tower.

Westward movements from old main track are governed by a home signal located 200 feet east of tower. Upper light governs route to NP main track; lower light governs route to GN main track.

Whistle Signal: 4 long to NP main track; 2 long, 1 short to GN main track.

Westward movements from waterfront are governed by a dwarf signal located 300 feet east of tower.

Whistle Signal: 3 long to NP main track; 1 long to Pier 14 lead.

Eastward movements from NP 5th Subdivision main track are governed by a home signal located 1000 feet west of tower. Upper light governs route to tunnel; lower light governs diverging routes.

Whistle Signal: 1 long to tunnel; 3 long to waterfront; 4 long to old main track; 5 long to GN running track; 1 short from American Can Spur to main track.

Eastward movements from Pier 14 lead are governed by a dwarf signal located 100 feet east of tower. Whistle Signal: 1 long to waterfront.

Eastward movements against the current of traffic into the tunnel are governed by a dwarf signal located 250 feet west of the north entrance to the tunnel.

6. **At Bridge 4**, bascule span—Whistle signals to be used by westward trains and engines for interlocking routes:

To Fremont: 1 long.

To Ballard: 1 long, 1 short.

7. **At Fremont**—Passenger station is one-half mile west of siding.

8. **At Woodinville**—Normal position of junction switch is for Eleventh Subdivision.

9. **At Bromart and Edgecomb**—Normal position of junction switch is for Thirteenth Subdivision.

10. **At GN Snohomish**—No NP train order signal maintained.

Highway crossing signals just east of GN passenger station are automatically operated on all tracks by approaching trains. When the crossing is not to be fouled by a train standing or switching on the control sections, the operation of the signals should be temporarily suspended by a member of the crew operating the manual control in accordance with instructions inside the control box. Care must be used to have the signals restored to operation in case of the approach of another train.

11. **At Lowell**—Private road crossing leading to EP&P Company, east of station, is the only vehicular route to the plant. Train stopping should avoid blocking this crossing when practicable.

12. **At GN Junction**—No train order signal maintained.

13. **At GN Delta Jct. Interlocking**—Westward trains will call for route by one long, one short, one long blast of whistle. Eastward trains by one long, one short, two long blasts of whistle. No train order signal maintained at Delta Jct.

14. **At Kruse**—A switch indicator, governing train and engine movements from the Northern Pacific track to the Great Northern main track, consisting of a single unit (normally dark) and a switch-key-controller mounted on an iron mast, is located at the clearance point of the Northern Pacific connection, and must be operated by a member of the crew who, together with the engineer, must observe and be governed by its indication before fouling the GN main track or lining main track switch for movement to the GN main track.

If indicator displays a yellow light when switch-key-controller is operated, switch may be lined and movement to main track may be made immediately in accordance with train rights and operating rules. Display of yellow light must continue until leading wheels have passed clearance point.

If indicator does not display a yellow light when switch-key-controller is operated, train or engine movement to GN main track may be made in accordance with train rights and operating rules, after lining switch, waiting three minutes and taking every precaution to provide proper protection.

To operate switch indicator, insert switch key in controller and turn clockwise toward "R", hold a few seconds and remove key. If yellow light is displayed and intended movement is not made, insert switch key in controller and turn counter-clockwise toward "N" to restore signal system to normal condition to avoid delay to trains on GN main track.

Switch-key-controller must never be operated toward "N" after having been operated toward "R" if intended movement to main track is to be made.

15. **At Wickersham**—Water supply is for use in case of emergency only.

16. **Helper engines**—When helping trains which are operated by diesel road engines helper will be placed behind caboose or ahead of cars of insufficient strength to withstand the push of engine, and will be cut off at the summit of Maltby hill. If necessary to run the helper through after helping the train to the summit, it will be cut off and run light.

17. **Logs**—Trains with logs must not run via King St. Tunnel.

18. **Yard Limits**—Tracks between yard limit signs east of Argo and west of Fremont operated as one yard. Tracks between yard limit signs east of Bromart and GN-Snohomish, operated as one yard. Tracks between yard limit signs east of Arlington and west of Arlington Jct. operated as one yard.

19. **Register Stations**—Seattle (South Portal Tower), Woodinville, GN-Snohomish. Everett for NP trains. Wickersham, Sumas. Arlington for fourteenth subdivision trains.

20. **Register Exceptions**—Trains will register by Form 608 at GN-Snohomish. Register books at Bromart and Edgecomb for use as instructed.

21. **Clearance Exceptions**—Westward trains via waterfront will secure clearance at North Portal. At Bromart and Edgecomb, clearance not required. At GN-Snohomish, eastward trains must secure clearance. At Arlington Junction, clearance not required. Trains originating secure clearance at Arlington.

SIXTH SUBDIVISION.

(ROSLYN BRANCH.)

- Speed Restrictions—** Maximum Speeds Permitted
 Zone—Between All trains
 Cle Elum and Ronald 20 MPH.
 Cle Elum through city limits 10 MPH.
- Bridge and Engine Restrictions—**Engines Classes A-2 to A-5 inc. and Z-5 to Z-8 inc. not permitted.
- At Cle Elum,** Eastward trains must stop 1200 feet west of wye switch.
 Switch on west leg of wye, leading to coal dock track, must be left lined for coal dock track.
- Public Crossing—**On track leading to Mine 9, trains will stop before passing and trainmen protect movement of cars or engines over crossing.
- Mountain Grade:** Between Cle Elum and 4.2 miles west.
 Before beginning descent, air brake tests must be made as prescribed by Air Brake Rule 35 and air test card delivered to operator at Cle Elum.
 Descending trains must carry 90 pounds brake pipe pressure. Following any stops during descent, engineer must recharge brakes before starting, and conductor must not give proceed signal until at least 80 pounds is shown on caboose gauge.
 Retaining valve handles must be turned up on all cars before beginning descent and turned down at Cle Elum.
- Register Station—**Cle Elum.
- Clearance Exceptions—**No. 474 will not require clearance at Ronald.
- Derail—**On main track 2520 feet west of MP 1, between Cle Elum and Roslyn. At this location Rule 104 (a), 6th paragraph is modified to require derail to be set in derailing position while caboose or cars stand on main track and while switching to and from main track of coal washing plant. At all other times, derail shall be left in non-derailing position.

SEVENTH SUBDIVISION.

(BUCKLEY LINE AND BRANCHES.)

- Speed Restrictions—** Maximum Speeds Permitted
 Zone—Between
 Kanaskat Jct. and Bayne Jct. via joint track, all trains..15 MPH.
 Palmer Jct. and Meeker:
 Trains handling steam wrecking crane, pile driver
 or locomotive crane 20 MPH.
 Other trains 25 MPH.
 Cascade Jct. and Wilkeson and Carbonado:
 Trains handling steam wrecking crane, pile driver
 or locomotive crane 10 MPH.
 Trains with engine backing 15 MPH.
 Other trains 20 MPH.
 Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.
 Through corporate limits of:
 Enumclaw and Buckley 25 MPH.
 Orting 10 MPH.
- Bridge and Engine Restrictions—**
 Between Kanaskat Jct. and Bayne Jct. via joint track, wrecking cranes 41 to 48 inc., pile driver 25 and engines heavier than class S-4, not permitted.
 Between Palmer Jct. and Meeker, Engines, NP Classes A-2 to A-5 inc. and Z-5 to Z-8 inc., and CMStP&P Classes S-1 and S-2, not permitted.
 Between Cascade Jct., Wilkeson and Carbonado, Engines Classes Q-5, Q-6, W-3, W-5 and A to A-5 inc., Z-3 to Z-8 inc., and wrecking cranes 45 to 48 inc., not permitted.

Trains handling logs will not cross on overhead bridge on CMStP&P track between Bayne Jct. and Kanaskat Jct. while a train is passing under this bridge on NP First Subdivision.

Trains handling wrecking cranes 45, 46, 47 and 48, over all bridges 15 MPH.
 Bridge 16, South Prairie Creek, between Cascade Jct. and Buckley. Engines classes Z-4 10 MPH.
 A, A-1, W-3, W-5, and Z-3..... 20 MPH.
 Bridge 16.1, South Prairie Creek, between Cascade Jct. and Buckley, engines class Z-4 20 MPH.
 Bridge 0, South Prairie Creek, just east of Cascade Jct. on Wilkeson line, and Bridge 4, Gale Creek, at Wilkeson:
 Engines classes T, W, W-1, W-2 and W-4 25 MPH.
 Heavy Car Restrictions: Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent.

Trains handling cars less than 30 ft. long with total weight exceeding 169,000 pounds when coupled in groups or next to engine or tender:

Over Bridge 16 10 MPH.
 Over Bridge 16-1 20 MPH.

If such cars are separated from each other and from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds, above speed restrictions will not apply. Over Bridge 0 and Bridge 4, such cars must be separated from each other and from engine or tender with at least one car 40 ft. long with total weight not over 169,000 pounds and trains handling must not exceed 25 MPH.

- At Bayne Jct.,** normal position of junction switch is for joint CMStP&P and NP track between Bayne Jct. and Kanaskat Jct.
- At Enumclaw—**While using main track of White River Lumber Co., between Junction Switch with CMStP&P and yard limit sign 2000 feet east, all movements will be made in accordance with Rule 93.
 All movements of engines and cars over highway crossing on track between NP and White River Company's tracks must be protected by flagman.
- At Wilkeson—**Normal position of junction switch is for Carbonado Line. Clearance under tipple of Wilkeson Products Co.'s coal bunker is 13' 4" from top of rail and cars higher than coal cars should not be moved under it.

Before serving the East-Miller Coal Co., chutes of the Wilkeson Wingate Coal Co., located on tail track 3800 feet east of passenger station must be moved to proper clearance.

Stone quarry spur out of service, switch spiked.

- At Orting—**Water supply is for use in emergency only.
- Switches Equipped with Electric Locks and Emergency Releases:**
 At Palmer Jct., switch leading to 1st Subdivision. (See item 5 of 1st Subdivision.)
 At Meeker, the east switch of the crossover leading from the 7th Subdivision connection to the westward main track and the west switch of the crossover between tracks. (See item 10 of 2nd Subdivision.)
- Mountain Grade—**
 From 1000 feet west of MP 14, west of Buckley, to Cascade Jct., the descending grade reaches a maximum of 1.7%. The descending grade from end of track at Carbonado to junction at Wilkeson and from end of track at Wilkeson to Cascade Jct. reaches a maximum of 2.2%. Descending trains will use a sufficient number of retaining valves, as determined by the conductor and engineer handling the train, to insure proper control of speed.
- Register Station—**Enumclaw.
- Clearance Exceptions—**At Meeker, Kanaskat Jct. and Palmer Jct., clearance not required.
- Derails—**At Wilkeson on main track in front of coal bunkers. At Carbonado on main track 215 feet east of west switch of siding.

EIGHTH SUBDIVISION.

(GREEN RIVER BRANCH.)

- Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Bagley Jct. and Kanaskat:
Trains handling steam wrecking crane, pile driver, or locomotive crane10 MPH.
Other Trains15 MPH.
Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.
At Selleck—Restricted speed between one thousand feet west of siding and Anacortes Veneer Company's interchange tracks.
- Bridge and Engine Restrictions—**
Wrecking cranes 41 to 48 inc., pile driver 25 and engines heavier than Class S-4 not permitted.
- At Kanaskat—**normal position of wye switch is for west leg of wye.
- At Kanaskat Jct.,** normal position of junction switch is for joint CMStP&P and NP track between Kanaskat Jct. and Bayne Jct.
- At Selleck—**Anacortes Veneer Company's tracks may be used to a point 250 feet beyond the east switch. All movements must be made at restricted speed, looking out for engines and cars of the Anacortes Veneer Co.
- Mountain Grade—**
Between Selleck and Kanaskat, the grade reaches a maximum of 2.0% and on westward trains a sufficient number of retaining valves, as determined by the conductor and engineer handling the train, will be used to insure proper control of speed.
- Register Station—**Kanaskat.
- Clearance Exceptions—**At Kanaskat Jct., clearance not required.
- Derails—**At Selleck, derail on west end of NP siding and derail on Anacortes Veneer Company's track 1020 feet west of west yard switch.

TENTH SUBDIVISION.

(ORTING BRANCH)

- Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Lake Kapowsin and Puyallup River Jct.10 MPH.
Puyallup River Jct. and Orting20 MPH.
Lake Kapowsin and Orting—
Trains handling steam wrecking crane, pile driver or locomotive crane10 MPH.
Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.
- Bridge and Engine Restrictions—**
Engines Class W-3 and heavier and wrecking cranes 45 to 48 inc., not permitted.
Bridge 8, Puyallup River, at Puyallup River Jct.—
Wrecking cranes 41, 42, 43 and 44 and pile driver 25.....15 MPH.
Engines classes G-1, G-2, Q-5, Q-6, W, W-1, W-2.....10 MPH.
L-9, S-4, Q-1, Q-3, Q-4, T, T-1, Y, Y-1,
Y-2 and Y-320 MPH.
Heavy Car Restrictions—Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent.
Cars less than 30 ft. long with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender and cars more than 30 ft. long with total weight exceeding 169,000 pounds, in groups of two or more, must be separated from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds.
- At Orting—**Water supply is for use in emergency only.

4. Mountain Grade—

From 2000 feet east of MP 8 to 1000 feet east of MP 6, between Orting and Puyallup River Jct., the grade reaches a maximum of 1.9% descending for a short distance, and on westward trains a sufficient number of retaining valves, as determined by the conductor and engineer handling the train, will be used to insure proper control of speed.

- Clearance Exceptions—**At Orting, clearance not required if train order signal is in proceed position, except during assigned hours of telegraph service.
At Lake Kapowsin, clearance not required.
- Derails—**At Orting, on main track just east of passenger station. At Lake Kapowsin, on main track 100 feet west of first west switch.

ELEVENTH SUBDIVISION.

(BELT LINE.)

- Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Black River and Woodinville:
Trains handling steam wrecking crane, pile driver, or locomotive crane20 MPH.
Other trains30 MPH.
At Renton—Between home signals of PCR and CMStP&P Railroad crossing20 MPH.
Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.
- Bridge and Engine Restrictions—**Engines Classes A to A-5 inc. and Z-5 to Z-8 inc., not permitted.
Bridge 23, Sammamish River at Woodinville:
Engines classes Q-5, Q-6, W-3, W-5, Z-3, Z-4 and trains handling wrecking cranes 45, 46, 47 or 48.....15 MPH.
Trains handling wrecking cranes 41 to 44 inc. and pile driver 2520 MPH.
Heavy Car Restrictions (Bridge 23)—Trains handling cars with total weight exceeding 214,000 pounds, or cars with total weight exceeding 169,000 pounds and next to engine or tender20 MPH.
If such heavy cars are separated from each other and from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds, speed restriction will not apply.
- At Black River—**In setting out cars on the west leg of wye, cars must not be left between Second Subdivision west wye switch and road crossing approximately 765 feet from that switch in the direction of Renton.
- At Renton—**Boeing east connection leading to warehouse must not be used by Class W or heavier engine account sharp curvature.
- At Quendall—**Road crossing on Barbee Mill spur should be inspected for gravel and debris and known to be safe before passing over it.
- At Kirkland—**Passenger Station is 2250 feet east of siding.
- At Woodinville—**Normal position of junction switch is for Eleventh Subdivision.
- Switches Equipped with Electric Locks and Emergency Releases;**
At Black River, east wye switch leading to 2nd Subdivision and the west switch of crossover from the westward to the eastward main track. (See also item 8 of 2nd Subdivision.)
- Yard Limits—**Tracks between yard limit sign west of Renton and the connections with double track at Black River operated as one yard.
- Register Stations—**
Black River and Woodinville.
- Register Exceptions—**At Black River all trains register by Form 608.

TWELFTH SUBDIVISION.

(SNOQUALMIE BRANCH.)

- Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Woodinville and Fall City25 MPH.
Fall City and North Bend15 MPH.
Near Issaquah, over public crossing 1062 feet west of
MP 1810 MPH.
Trains handling steam wrecking crane, pile driver, or locomotive
crane15 MPH.
Advance-warning signs are located 1500 feet in advance of the
Reduce speed signs.
- Bridge and Engine Restrictions—**
Between Woodinville and Earlmont, engines heavier than Class
W-5, not permitted.
Between Earlmont and North Bend, engines heavier than Classes
S-4, Y-2, and Q-1 and wrecking cranes 45 to 48 inc., not per-
mitted.
Between Issaquah and North Bend, wrecking cranes 41, 42, 43
and 44 and pile driver 25 not permitted.
All high trestles15 MPH.
Bridge 31.2, between Fall City and Snoqualmie Falls....10 MPH.
Bridge 6, Sammamish River, between Woodinville and Red-
mond Bridge 27.2, Raging River, between Preston and Fall City,
and Bridge 35, Snoqualmie River, between Snoqualmie and
North Bend.
Double header engines classes Q-1, S-4, T, and T-1.....20 MPH.
Bridge 5.46, Snoqualmie Falls Lumber Company spur:
Engines class L-9, not permitted.
Engines classes T and heavier and double header Q-1, and Y to
Y-2 and wrecking cranes 41, 42, 43 and 44 and pile driver 25
not permitted.
Engines classes S-4 and single header Q-1 and
Y to Y-210 MPH.
Heavy Car Restrictions: Bridge 6, Bridge 27.2, Bridge 35 and
Bridge 5.46:
Cars with total weight exceeding 214,000 pounds, not permitted
except on authority of superintendent.
Cars with total weight exceeding 169,000 pounds must be
separated from each other and from engine or tender with one
car 40 ft. long with total weight not over 169,000 pounds.
Trains handling such cars over bridges.....10 MPH.
- At North Bend**—Normal position of west wye switch will be for
the wye.
- At Preston**—Trains departing must keep at least fifteen (15)
minutes apart.
- Register Station**—Woodinville.
- Clearance Exceptions**—At North Bend clearance not required.

THIRTEENTH SUBDIVISION.

(HARTFORD LINE.)

- Speed Restrictions—** Maximum Speeds Permitted
Zone—Between All Trains
Bromart and Edgecomb 30 MPH.
Trains handling steam wrecking crane, pile driver, or
locomotive crane20 MPH.
Advance-warning signs are located 1500 feet in advance of the
Reduce speed signs.
At Snohomish, over public crossing just west of Snohomish River
Bridge10 MPH.
- Bridge and Engine Restrictions—**Engines Classes heavier than
W-5 not permitted.
Draw Span, Bridge 38, Snohomish River20 MPH.

- At Bromart and Edgecomb**, the normal position of junction
switch is for the Thirteenth Subdivision.
- At Snohomish**—The track extension from the tail of the wye
crosses a high speed main highway at "D" Avenue (2323 feet
northwesterly from the wye tail track switch). Before train or
engine movements are made over this crossing, the manually
controlled highway crossing signals must be placed in operation
by a member of the crew operating the electric switches which
are contained in metal boxes on poles located on each side of
the street and north of the track. After movements have been
completed, the signals must be restored to non-operating.
- At Hartford**—Switch leading to the mill should be left lined for
the mill track to act as a derail for the lumber and shingle sheds.
- Helper Engines**—When helping trains which are operated by
diesel road engines helper will be placed behind caboose or ahead
of cars of insufficient strength to withstand the push of engine,
and will be cut off at the summit of Getchell hill. If necessary
to run the helper through after helping the train to the summit,
it will be cut off and run light.
- Clearance Exceptions**—At Bromart and Edgecomb, clearance
not required.
- Yard Limits**—Tracks between yard limits east of Bromart and
west of Snohomish operated as one yard.

FOURTEENTH SUBDIVISION.

(DARRINGTON BRANCH.)

- Speed Restrictions—** Maximum Speeds Permitted
Zone—Between
Arlington Jct. and Darrington,
Trains handling steam wrecking crane, pile driver, or locomotive
crane15 MPH.
Trains handling logs15 MPH.
Other Trains20 MPH.
- Bridge and Engine Restrictions—**Engines Class Q-5 and engines
heavier than W-2 and wrecking cranes 45 to 48 inc., not per-
mitted.
Bridges 2 and 7, Stillaquamish River between Arlington Jct.
and Cicero.
Bridge 10, Deer Creek, between Cicero and Oso.
Bridge 11, Stillaquamish River between Oso and Halterman.
Bridge 22.1, Squire Creek, between Fortson and Darrington:
Double headers Classes G-1, G-2, L-9, L-10, Q-1,
Q-3, Q-4, S-4, T, T-1, W, W-1, W-2, W-4 and Y
to Y-3, inc., not permitted; single headers these
classes 8 MPH.
Double header diesel-electric engines, not permit-
ted; single header 8 MPH.
Trains handling logs over steel truss bridges Nos. 2, 7, 10, 11,
18 and 22.1 5 MPH.
Heavy Car Restrictions—Cars with total weight exceeding
214,000 pounds not permitted except on authority of superin-
tendent.
Cars less than 30 ft. long with total weight exceeding 169,000
pounds must be separated from each other and from engine or
tender and cars more than 30 ft. long with total weight exceed-
ing 169,000 pounds in groups of two or more must be separated
from engine or tender with one car 40 ft. long with total weight
not exceeding 169,000 pounds.
Trains handling such heavy cars 8 MPH.
At Darrington, engines may use main track to engines stop
sign located 1028 feet west of east switch to Sauk Logging
Co.'s set out track and may use set out track to engine stop
sign located 1000 feet west of east switch to that track and will
not use loaded track beyond a point 360 feet from east switch.
- Register Stations**—Arlington and Darrington.
- Clearance Exceptions**—At Arlington Jct. and Darrington, clear-
ance not required.
- Derails—**
At Darrington, on main track 300 feet west of passenger station.

FIFTEENTH SUBDIVISION.

(BELLINGHAM BRANCH.)

- Speed Restrictions—**

Zone—Between	Maximum Speeds Permitted
	All Trains
Wickersham and Bellingham	20 MPH.
except over public crossing between MP 15 and Larson	15 MPH.

Trains handling steam wrecking crane, pile driver, or locomotive crane:

Wickersham and MP 5 (west of Park)	15 MPH.
MP 5 and MP 8	10 MPH.
MP 8 and Bellingham	15 MPH.

Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.

At Bellingham, between Kentucky Street and Passenger Station

	15 MPH.
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Engineers on all trains exercise judgment in speed where trouble may be expected.
- Bridge and Engine Restrictions—**Engines heavier than class W-5 not permitted.
- At Bellingham, flagman must precede all trains between Champion and Laurel Sts.**
Trains must stop and be preceded by flagman crossing Holly St. Normal position of gate at GN crossing is against NP trains.
- Between Park and Larson** all toilets in trains must be kept locked and employes are cautioned against throwing off refuse or articles which may become unsanitary.
- Register Stations—**Wickersham and Bellingham.
- Derails—**At Bellingham, derail on main track 568 feet east of GN crossing, between Bellingham and South Bellingham.

SIXTEENTH SUBDIVISION.

(GRAYS HARBOR LINE.)

- Speed Restrictions—**

Zone—Between	Maximum Speeds Permitted	
	Freight and Mixed	Passenger
Saint Clair and Hoquiam	35	40

Trains handling steam wrecking crane, pile driver or locomotive crane

	20 MPH.
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Hoquiam and Moclips:

Trains handling wrecking crane, pile driver or locomotive crane	15 MPH.
Other trains	20 MPH.

Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.

At Olympia, through tunnel speed must be controlled so that train can be stopped on emerging.

Eastward trains between east end of the curve at east end of tunnel and east city limits	20 MPH.
All other trains within corporate limits.....	10 MPH.

At Gate, approach Eighteenth Subdivision Junction Switch at restricted speed.

At Aberdeen and Hoquiam, all trains and engines at restricted speed within yard limits.

At Aberdeen—Over streets and crossings

	10 MPH.
	Within City Limits, elsewhere
	20 MPH.
- Bridge and Engine Restrictions—**
Engines classes A to A-5 inc. and Z-4 to Z-8 inc., not permitted. Between Hoquiam and Moclips, engines classes Q-5, Q-6, W-3, W-5, Z-3 to Z-8 inc., and wrecking cranes 45 to 48 inc., not permitted.
- Bridge 46, Cloquallum River between Malone and Elma:**
Engines classes W-3, W-5 and Z-3

	10 MPH.
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Engines Classes G-1, G-2, Q-5, Q-6, W, W-1, W-2 and W-4

	20 MPH.
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Trains handling wrecking cranes 45 to 48 inc., over all bridges

	15 MPH.
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Bridge 82, Chenois Creek; Bridge 84, Berg Slough, between Hoquiam and Tulips; Bridge 86, Humptulips River between Tulips and Copalis; Bridge 91-1, Copalis River between Carlisle and Onslow; Bridge 97, Joe Creek, between Aloha and Pacific Beach.

Single header engines Classes W, W-1, W-2, and W-4

	10 MPH.
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Double header engines Classes Q-1, Q-3, Q-4, S-4, T, and T-1

	20 MPH.
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Double header engines Classes W, W-1, W-2 and W-4 not permitted.

Bridge 9, Deschutes River; Bridge 68, Wishkah River, at Aberdeen; Bridge 72.2, Hoquiam River, at Hoquiam

	20 MPH.
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Bridge 91.1, wrecking cranes 41 to 44 inc., and pile driver 25

	15 MPH.
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Heavy Car Restrictions:

Bridge 46—Trains handling cars with total weight exceeding 214,000 pounds, not permitted except on authority of superintendent.

Cars less than 30 ft. long with total weight exceeding 169,000 pounds coupled in groups or next to engine or tender....10 MPH. If such short cars are separated from each other and from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds, above speed restriction will not apply.

Bridges 82, 84, 86, 91-1 and 97—Cars with total weight exceeding 214,000 pounds, not permitted except on authority of superintendent.

Cars with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds.

At Olympia—On freight house tracks "Chicago" and "Buffalo" and on Tumwater spur, engines heavier than class W-2 not permitted, except class W-3 engines may use wye and Tumwater spur to headblock of Olympia Harbor Lumber Company spur, a distance of approximately 5800 feet.

Engines heavier than class L-9 not permitted on Jefferson St., or Port Dock tracks.

At Carlisle—Engines or cars not permitted on Standard Oil Spur beyond 200 feet from head block of switch.

At Aloha: NP engines not permitted on Mill Spur.

- At Saint Clair—**Switch leading to 3rd Subdivision and the east switch of crossover are electrically locked, and equipped with emergency release. (See also Item 8 of 3rd Subdivision.)
Movements between clearance point between Third and Sixteenth Subdivisions and yard limit sign on Sixteenth Subdivision, one mile west of Saint Clair must be made as prescribed by Rule 93.
- At Olympia—**
Time of trains applies at passenger station.
First track north of main track, (capacity 40 cars) is designated as siding.
Movements through Tunnel District are governed by color light type automatic signals as follows:
Westward three indication signal No. 87 located 1750 feet east of MP 9.
Westward two indication signal No. 93 located 275 feet east of tunnel.
Eastward two indication signal No. 94 located 275 feet west of tunnel.
Eastward two indication dwarf signal located between main track and siding, 275 feet west of tunnel, normal indication stop, governs eastward movements from siding to main track.
Switch of siding must be lined for main track before signal will indicate proceed. Before opening switch of siding, eastward trains or engines from siding must have proceed indication from signal No. 94.
Trains or engines from Jefferson St. Line, in addition to having proceed indication from signal No. 93 before opening main track switch, must comply with the provisions of Rule 513.
Westward trains finding signal 93 and eastward trains finding signal 94 or dwarf signal located between main track and siding, 275 feet west of tunnel, in stop position may proceed through tunnel only under protection of flag.
Connection leading from NP Jefferson Street Spur to UP scale track, at Eighth street, just east of tunnel has no clearance with the UP siding for a distance of 150 feet from a point 195

feet from switch connection on Jefferson Street Spur. Trains or yard engines moving to or from NP Jefferson Street Spur and UP scale track must protect themselves and make certain that no UP trains are moving on either their main track or siding while movement is being made either to or from scale track.

Second track north of main track from crossover opposite freight depot to west main track switch, used exclusively for repair track.

5. **At Belmore and Little Rock**—When necessary, sidings may be blocked with cars without notice. Trains intending to use these sidings for meeting other trains will first ascertain if there is sufficient room.
6. **At Gate**, normal position of the main track junction switch is for the Eighteenth Subdivision.
7. **At Elma**—Water spout must be left pointed east when not in use.
8. **At Montesano**—Passenger Station is one-half mile west of siding. Time of first class trains applies at passenger station. Switch leading to industry spur west end of team track to be left set for spur to act as derail.
9. **At Aberdeen**, the normal position of switch at the end of double track, is for eastward trains and normal position of Junction switch, 260 feet east of passenger station, is for the UP track. Restricted clearance between coach track No. 1 just east of passenger station and UP main track, at turn out. Trains and engines using coach track No. 1 must protect against trains using UP track.
Restricted clearance at umbrella shed passenger station.
Westward trains will stop East of Chehalis Street when Wishkah River drawbridge signals do not indicate clear route.
10. **Between Aberdeen and Hoquiam**, second class and inferior trains may run ahead of delayed first class trains without train order authority, avoiding delay to first class trains and being prepared to protect immediately.
11. **At Hoquiam**, no train order signal maintained.
12. **At Hoquiam River drawbridge**—
All trains handling rock stop and make inspection of rock before passing over bridge.
To call for route when running against current of traffic, one long, one short, one long blast of whistle.
13. **Yard Limits**—Tracks between the yard limit signs east of Carlisle and west of Onslow operated as one yard.
14. **Register Stations**—
Saint Clair.
Olympia—For trains Nos. 461 and 464 and for trains originating and terminating.
Gate, Aberdeen and Hoquiam.
15. **Register Exceptions**—At Saint Clair trains will register by Form 608 and will be furnished register check Form 602 by operator.
At Olympia—Trains Nos. 461 and 464 register by Form 608 at passenger station and at box located west of bridge 9.
At Gate, trains 461 and 464 will register by Form 608.
16. **Clearance Exceptions**—
At Aberdeen Jct., trains originating will not require clearance.
At Hoquiam, all trains must secure clearance.
At Moclips, clearance not required.
17. **Derails**—At Saint Clair, on siding 179 feet west of east switch.

SEVENTEENTH SUBDIVISION.

(AMERICAN LAKE LINE.)

- | 1. Speed Restrictions—
Zone—Between | Maximum Speeds Permitted | |
|---|--------------------------|-------------------|
| | Freight
and Mixed | Passenger |
| Nisqually and Lakeview | 30 | 35 |
| Trains handling steam wrecking crane, pile driver, or locomotive crane | | 20 MPH. |
| Advance-warning signs are located 1500 feet in advance of the Reduce speed signs. | | |
| At Camp Murray: | | |
| Over public crossings just east and west of station..... | 10 MPH. | |
| Between Stone and Wegoe, over public crossing, 680 feet west of MP 6 | | 15 MPH. |
| At Fort Lewis: | | |
| Approach first and second public crossings west of passenger station at | | Restricted Speed. |
| Over Dupont highway public crossing just east of passenger station | | 5 MPH. |
| On Dupont Spur and all tracks within Dupont plant..... | | 15 MPH. |
| On Dupont Spur, while handling STAX tank 9875 and 9876 under load | | 10 MPH. |
2. **Bridge and Engine Restrictions**—Engines Classes heavier than W-5 not permitted.
Bridge 1, between Lakeview and Tillicum:
Trains handling wrecking cranes 45 to 48 inc.....15 MPH.
At Fort Lewis on Dupont Spur, engines heavier than W-2 and wrecking cranes 45 to 48 inc., not permitted.
 3. **At Nisqually**—Switch leading to Third Subdivision and west switch of crossover are electrically locked.
Train order signal does not govern Seventeenth Subdivision trains.
See also item 7 of Third Subdivision.
 4. **At Fort Lewis**—Time of trains applies at passenger station.
Depot Siding (Capacity 27 Cars) designated as siding.
House track switch must be left lined for house track to act as derail for east end of "depot" siding.
 5. **At Fort Lewis and North Fort Lewis**—
Train and engine movements over Cantonment tracks shall be as prescribed by Rule 93.
Train or engine movements over the following crossings must be protected by flagman on ground:
Pacific Highway, Fort Lewis proper;
Steilacoom Highway, between Wegoe and North Fort Lewis;
On Cantonment tracks when backing or pushing cars ahead of engine over street crossings.
Other movements over street crossings will be made at restricted speed.
Many government warehouses, semi-portable loading ramps and other structures have less than standard side clearance, and employees working along these tracks will be governed accordingly.
STAFF SYSTEM—DUPONT SPUR, no train or engine will move on the Dupont Powder Company's Spur until they have obtained staff from staff box at the junction switch. Possession of staff makes a train superior to all other trains on this spur, staff to be returned to staff box after completion of trip.
Derail on Dupont Powder Company's Spur 950 feet from main track switch.
Entrance to Dupont Powder Company Plant protected by gate across the spur near Cap Magazine, and before entering plant the stack of engine must be covered with the spark arresting device, located overhead near entrance. No cars will be disturbed inside of gate until foreman consulted and permission obtained.
Engines using north and south lines move at restricted speed expecting to find cars spotted at different locations on these tracks.
Toilets must be kept locked and no refuse thrown from trains on Cantonment tracks or inside Fort Lewis Yard Limits.
At Camp Murray—Toilets of cars must be kept locked and no refuse thrown from trains.

6. **At Lakeview**—Normal position of main track junction switch is for the Seventeenth Subdivision.
7. **Register Stations**— Nisqually Lakeview
8. **Register Exceptions**—At Nisqually and Lakeview trains register by Form 608 and will be furnished register check by train order or Form 602 by operator.
9. **Clearance Exceptions**—At Lakeview trains will not require clearance if train order signal indicates proceed.

EIGHTEENTH SUBDIVISION.

(GATE LINE.)

1. **Speed Restrictions**—

Zone—Between	Freight and Mixed	Passenger
Centralia and Gate	30	35
Trains handling steam wrecking crane, pile driver, or locomotive crane	20 MPH.	
Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.		
At Centralia—Over streets within corporate limits.....	30 MPH.	
At Blakeslee Junction—Over CMStP&P and UP crossings	15 MPH.	
2. **Bridge and Engine Restrictions**—

Between Centralia and Gate, via either UP Route 1, or NP Route 2, engines classes A to A-5 inc. and Z-4 to Z-8 inc., not permitted. Bridge 1, Skookumchuck River, between Centralia and Blakeslee Junction, NP Route 2:

UP engines Nos. 800 to 844, 3900 to 3999, 4000 to 4024, 5040 to 5099, 5306 to 5313, 5318, 5400 to 5414, 9000 to 9087 and 9500 to 9514 not permitted.

Engines classes W-3, W-5, Z-3 and UP engines Nos. 3500 to 3569, 3670 to 3674, 3800 to 3839, 5000 to 5039, 5300 to 5305, 5500 to 5529 and 7002

10 MPH.

Engines classes Q-5, Q-6 and UP engines Nos. 2100 to 2171, 2200 to 2320, 2480 to 2564, 2700 to 2715, 2726 to 2735, 7000, 7001 and 7003 to 7039

20 MPH.

Trains handling wrecking cranes 45 to 48 inc., over all bridges

15 MPH.

Heavy Car Restrictions:
Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent.
Cars less than 30 ft. in length with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender and cars more than 30 ft. long with total weight exceeding 169,000 pounds each, in groups of two or more, must be separated from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds.
3. **Movement of Trains Between Centralia and Blakeslee Junction.**
NP track will be known as Route 2; UP track will be known as Route 1. Both routes are included in Centralia yard limits. Eastward movements will be made over Route 2. Westward movements will be made over Route 1.
4. **Blakeslee Junction Interlocking**—
If home signal does not indicate proceed the time release may be operated according to instructions inside of box on instrument house at crossing.
Spring switch, trailing from west end of connection from Route 1 to NP main track, normal position for NP main track.
Hand throw switch, at east end of connection leading from NP main track to Route 1, normal position for connection.
Spring switch trailing from each end of connection between Route 2 and UP main track, normal position of west switch for the connection, of the east switch for NP main track.
5. **At Grand Mound and Rochester**—When necessary, sidings will be blocked with cars without notice. Trains intending to use these sidings for meeting other trains will first ascertain if there is sufficient room.

6. **At Gate** normal position of main track junction switch is for Eighteenth Subdivision.
7. **Register Stations**— Centralia Passenger Station. Gate.

NINETEENTH SUBDIVISION.

(ELMA BRANCH AND U. S. GOVERNMENT RAILWAY)

1. **Speed Restrictions**—

Zone—Between	Maximum Speeds Permitted
Elma, Bangor and Bremerton, Trains handling steam wrecking crane, pile driver, or locomotive crane	15 MPH.
Other trains:	
Bangor, Bremerton and Marmac	25 MPH.
Marmac and Stimson	20 MPH.
Stimson and Elma	25 MPH.
2. **Bridge and Engine Restrictions**—
Engines classes A to A-5 inc. and Z-4 to Z-8 inc., not permitted. Bridge 1, County Road, and Bridge 2, Cloquallum River, between Elma and White:
Engines classes W-3, W-5 and Z-3

20 MPH.

Bridge 2.1, Wildcat Creek, between Elma and White:
Engines classes Q-5, Q-6, W-3 and W-5

10 MPH.

G-1, G-2, L-9 and Z-3

20 MPH.

Bridge 2.2, Wildcat Creek, between Elma and White:
Engines classes W-3, W-5 and Z-3

20 MPH.

Bridges 1, 2, 2.1 and 2.2, wrecking cranes 41 to 48 inc. and pile driver 25

15 MPH.

Between McCleary Jct. and McCleary, engines heavier than Class W-2, wrecking cranes 41 to 48 inc., and pile driver 25 not permitted on spur.

Heavy Car Restrictions—Bridges 1, 2 and 2.1. Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent. Cars less than 30 ft. long with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender, and cars more than 30 ft. long with total weight exceeding 169,000 pounds each, in groups of two or more, must be separated from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds. At Shelton, turntable cannot be used by Class Z-3 engines.
3. **Mountain Grade**—Between Stimson and Marmac.
At Stimson—Air brake tests as prescribed by Air Brake Rule 35 must be made before beginning descent of mountain grade. Air test card to be delivered to operator at Shelton.
Descending trains will carry 90 pounds brake pipe pressure Stimson to Shelton. Following any stops during descent, engine-man must fully recharge the brakes before starting, and conductor must not give proceed signal until at least 80 pounds is shown on caboose gauge.
Immediately following departure from McCleary engineman of eastward freight trains will increase brake pipe pressure to 90 pounds.
Retaining valves must be used on all loaded cars and on one-half the empty cars in mixed trains of loads and empties, using retaining valves on one-half the empties, beginning at the head car and alternating on every other car.
On trains of all empties the retaining handles must be turned up beginning at the head car and alternating every other car.
4. **At Bangor**—Gates across both legs of wye will be locked. Guards stationed at the gates will unlock and permit engines to use wye when requested to do so.
Main and yard tracks are on a three tenths of one per cent descending grade; cars set out at this point must have sufficient hand brakes set on west end to prevent them from moving.
5. **At N.A.D. Jct.**—When necessary, siding may be blocked with cars without notice. Trains intending to use this siding for meeting other trains will first ascertain if there is sufficient room.
6. **At N.A.D. Jct., Bremerton Jct. and Shelton**—Normal position of junction switch is for Elma-Bangor Line.

7. **At Bay Shore**—No. 1 track is the siding. Gate across track to Navy storage yard is secured with private lock. Key located in telephone box and must be left there after gate is returned to normal position.
8. **At Shelton**—NP engines may operate over Simpson Logging Company tracks to switch NP yard tracks west of First Street, to turn on wye, or to effect interchange with Simpson Logging Co.
Simpson Logging Company engines may operate over NP main track from junction with Simpson Logging Company's track near Mill Street to a point 500 feet west of the switch to the spur serving Simpson Logging Company's warehouse and may operate over NP yard tracks north of First Street. All movements will be governed by Operating Rule No. 93.
Olympia Plywood Company Spur—Overhead clearance is restricted on that portion paralleling loading sheds.
9. **At McCleary Junction**—NP trains using wye or main track between McCleary Junction and McCleary, will protect against McCleary Timber Company's trains.
10. **Register Stations**—Elma, Shelton, Bremerton, Bangor.

TWENTIETH SUBDIVISION.

(OCOSTA BRANCH.)

1. **Speed Restrictions**—
- | Zone—Between | Maximum Speeds Permitted |
|---|--------------------------|
| Aberdeen Jct. and MP 3 | 20 MPH. |
| MP 3 and Markham or Cosmopolis | 12 MPH. |
| Aberdeen Jct. and Markham or Cosmopolis, trains handling steam wrecking crane, pile driver, or locomotive crane | 10 MPH. |
2. **Bridge and Engine Restrictions**—
Engines Class T not permitted.
Engines heavier than class Q-1, wrecking cranes 41 to 48 inc., and pile driver 25 not permitted, except engines not heavier than class W-2 may use Bishop and Wagar spurs and main track between Aberdeen Jct. and Bridge 1, Chehalis River.
Bridge 1, Chehalis River, between Aberdeen Jct. and Cosmopolis Jct., Bridges 0 and 1, between Cosmopolis Jct. and Cosmopolis: Engines Classes Q-1 and S-4

2. **Bridge and Engine Restrictions**—
Engines Classes Q-5, Q-6, W-3, W-5, A to A-5 inc. and Z-3 to Z-8 inc., and wrecking cranes 45 to 48 inc., not permitted.
Bridge 0, Newaukum River,
" 2, Chehalis River, between Chehalis Jct. and Littell,
" 5, Chehalis River, between Adna and Millburn.
" 6, Chehalis River, between Millburn and Ceres,
" 16.1, Chehalis River, between Dryad and Dryad Jct.,
" 23, Chehalis River, between PeEll and McCormick,
" 38, Willapa River, between Lebam and Nallpee,

Bridges 42 and 45, Willapa River, between Holcomb and Menlo, Engines NP Classes W, W-1, W-2 and W-4 doubleheader and CMStP&P Classes F-6, F-6A, L-3 and similar or heavier, and CMStP&P Class A doubleheader, not permitted.

CMStP&P engines Class L-2 10 MPH.
CMStP&P engines Classes C-7, single header Class A, doubleheader Class L-1 and 150-ton wrecking cranes X-8 and X-16 20 MPH.
Single header NP Engines Classes W, W-1, W-2 and W-4 25 MPH.

Heavy Car Restrictions—Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent.

Cars less than 30 ft. in length with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender and cars more than 30 ft. long with total weight exceeding 169,000 pounds each, in groups of two or more, must be separated from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds.

At Raymond, engines classes W, W-1 and W-2 not permitted on trestle at west end of Port of Willapa Dock and engines of these classes, when using east connection to Port Dock Tracks, must not exceed 8 MPH.

Bridge 53, Willapa River, between Raymond and South Bend, over draw span 20 MPH.

3. **At Chehalis Jct.**—
Switch leading to Third Subdivision and east switch of west crossover are electrically locked.
See also item 11 of Third Subdivision.
4. **Between Chehalis Jct. and Millburn**—Track will be used jointly by NP and CMStP&P and between Millburn and Dryad Jct. track will be used jointly by NP, CMStP&P and CW Ry., operated by and in accordance with NP Time Table and Special Instructions.
At Chehalis Jct., westward trains from CMStP&P to Twenty-first Subdivision, will stop at signal located on CMStP&P track, line the switch to eastward NP track, and, if signal indicates "proceed", train may enter eastward track; then, if train rights permit, line the switch for the Twenty-first Subdivision.
Eastward trains, from Twenty-first Subdivision, to enter CMStP&P tracks, will be governed by lower light on home signal on Twenty-first Subdivision.
5. **At Meskill Pit**—Approach rock quarry prepared to stop. Proceed at restricted speed expecting to find contractor's equipment and cables fouling main track. Account restricted clearance, engines or cars, higher than ballast cars, must not pass under bunkers.
6. **At Raymond**—
All trains stop before passing over Ocean Beach Highway, 250 feet west of station, and all switching movements over this crossing must be protected by flagman.
7. **Drawbridge 53**, Willapa River, west of Raymond, bridge tenders on duty 7:15 A. M. to 11:15 P. M., Monday through Friday and 7:15 A. M. to 3:15 P. M. on Saturday. Bridge will be left open when tenders not on duty. Trains will not pass over drawbridge until proceed signal is received from drawbridge tender, using yellow flag by day and a yellow light by night.
8. **Mountain Grade**—
MP 29 to 2000 feet west of MP 34, between Pluvius and Frances. This grade reaches a maximum of one and eight-tenths percent for short distances, and on westward freight or mixed trains a sufficient number of retaining valves, as determined by the conductor and engineer handling the train, will be used to insure proper control of speed.

TWENTY-FIRST SUBDIVISION.

(WILLAPA HARBOR LINE.)

1. **Speed Restrictions**—
- | Zone—Between | Maximum Speeds Permitted | |
|--|--------------------------|-----------|
| | Freight and Mixed | Passenger |
| Chehalis Jct. and South Bend..... | 30 | 35 |
| Trains handling steam wrecking crane, pile driver, or locomotive crane | 20 MPH. | |
- Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.

9. **Register Stations**—South Bend. Dryad Jct. Chehalis.
Millburn for CW trains.
10. **Clearance Exceptions**—At Dryad Jct., trains originating will not require clearance.

TWENTY-SECOND SUBDIVISION.

(YACOLT BRANCH.)

1. **Speed Restrictions**— Maximum Speeds Permitted
Zone—Between
Yacolt and Vancouver Jct.20 MPH.
Except—On curves15 MPH.
Trains handling wrecking crane, pile driver, or locomotive crane15 MPH.
Trains handling logs or wrecking cranes, pile drivers or locomotive cranes, approaching and passing through tunnel west of Yacolt10 MPH.
Advance-warning signs are located 1500 feet in advance of the Reduce speed signs.
2. **Bridge and Engine Restrictions**—
Wrecking cranes 41 to 48 inc., and pile driver 25 not permitted.
Engines classes heavier than W-2 not permitted between Ampere and Yacolt. Engines heavier than class W-3 not permitted between Vancouver Jct. and Ampere.
Bridge 23, Lewis River, between Heison and Yacolt:
Engines classes W, W-1, W-2 and W-4 8 MPH.
Heavy Car Restrictions—Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent.
Cars less than 30 ft. long with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender and cars more than 30 ft. long with total weight exceeding 169,000 pounds, must be separated from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds.
3. **Register Station**—Vancouver Jct.
4. **Clearance Exceptions**—At Vancouver Jct. and Yacolt, clearance not required.
5. **Derails**—At Vancouver Jct., on main track 200 feet from Junction switch.

TWENTY-THIRD SUBDIVISION.

(MOXEE BRANCH.)

1. **Speed Restrictions**— Maximum Speeds Permitted
Zone—Between
Yakima and Moxee City20 MPH.
Except,
Trains handling steam wrecking crane, pile driver, or locomotive crane10 MPH.
2. **Bridge and Engine Restrictions**—
Engines heavier than classes Q-1, S-4 and Y-3, and wrecking cranes 41 to 48 inc., and pile driver 25, not permitted.
Bridge 1.2, Yakima River, between Yakima and Terrace Heights:
Engines classes Q-3, T, and heavier, and double header Q-1 and Y to Y-3, not permitted.
Engines class S-4, and single header classes Q-1, and Y to Y-3 8 MPH.
Heavy Car Restrictions—Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent.
Cars with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds.
Trains handling such cars 8 MPH.
3. **Register Station**—
Yakima passenger station.
4. **Clearance Exceptions**—At Moxee City, clearance not required.

TWENTY-FOURTH SUBDIVISION.

(NACHES AND TIETON BRANCHES.)

1. **Speed Restrictions**— Maximum Speeds Permitted
Zone—Between
Yakima and Tieton and
Yakima and Naches: Trains with steam wrecking crane, pile driver or locomotive crane10 MPH.
All other trains:
Yakima and Brace20 MPH.
Brace and Weikel10 MPH.
Weikel and Tieton20 MPH.
Brace and Naches20 MPH.
2. **Bridge and Engine Restrictions**—
Engines heavier than classes Q-1, S-4 and Y-3, wrecking cranes 41 to 48 inc., and pile driver 25, not permitted.
Bridge 4, Naches River, between Brace and Glead:
Engines classes Q-3, T and heavier and double headers Q-1 and Y to Y-3 not permitted.
Engines class S-4, and single headers
Q-1 and Y to Y-3 8 MPH.
Heavy Car Restrictions—Cars with total weight exceeding 214,000 pounds not permitted except on authority of superintendent.
Cars with total weight exceeding 169,000 pounds must be separated from each other and from engine or tender with one car 40 ft. long with total weight not over 169,000 pounds. Trains handling such cars 8 MPH.
3. **At Brace**, normal position of switch is for Tieton Branch.
4. **Mountain Grade**—Tieton Branch, MP 6 to MP 8, between Weikel and Cowiche.
At Cowiche—Air brake tests as prescribed by Air Brake Rule 35 must be made before beginning descent of mountain grade Cowiche to Brace. Air test card to be delivered to operator at Yakima.
Descending trains will carry 90 pounds brake pipe pressure Cowiche to Yakima. Following any stops during descent, engineman must fully recharge brakes before starting, and conductor must not give proceed signal until at least 80 pounds is shown on caboose gauge.
Retaining valves must be used on all cars in trains consisting of more than 25 loads, and on not less than fifty percent of all loaded cars in trains consisting of less than 25 cars.
5. **Register Station**—Yakima passenger station.
6. **Clearance Exceptions**—At Naches and Tieton, clearance not required.
7. **Derails**—At Naches, on main track 200 feet east of east switch.

Note—Limit of load measurements based on 52' cars with 42' truck centers. Heights and widths in table allow 6 inches clearance.

MAXIMUM CLEARANCES

Table is based on open car loading equally divided on either side of center line of car.

	LIMIT OF LOAD—MEASUREMENT.											Max. Height	Max. Width	GOVERNING STRUCTURE	
	HEIGHT ABOVE TOP OF RAIL														
	1 ft. Wide	2 ft. Wide	3 ft. Wide	4 ft. Wide	5 ft. Wide	6 ft. Wide	7 ft. Wide	7 ft. 6 in. Wide	8 ft. Wide						
.....	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Bridge No. 17.2, Green River.
.....	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Signal Braces at 14th Ave.
.....	18' 1"	18' 1"	18' 0"	17' 10"	17' 8"	17' 6"	17' 3"	17' 1"	16' 11"	16' 11"	16' 11"	16' 11"	18' 1"	11' 6"	Tunnel No. 3.
1st Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Drawbridge No. 39
2nd Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Bridge No. 8.78, Puyallup River.
2nd Subdiv.	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	11' 6"	Approach to Drawbridge No. 39 at 15th Street.
3rd Subdiv.	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	11' 6"	Approach to Drawbridge No. 39 at 15th Street.
3rd Subdiv.	20' 6"	20' 6"	20' 6"	20' 2"	19' 8"	19' 3"	19' 3"	18' 9"	18' 5"	18' 5"	18' 5"	18' 5"	18' 8"	11' 6"	Nelson Bennett Tunnel.
3rd Subdiv.	20' 4"	20' 0"	19' 7"	19' 2"	18' 8"	18' 1"	17' 6"	17' 2"	16' 10"	16' 10"	16' 10"	16' 10"	20' 4"	11' 6"	Nelson Bennett Tunnel.
3rd Subdiv.	20' 6"	20' 4"	20' 1"	19' 9"	19' 6"	19' 2"	18' 8"	18' 4"	18' 1"	18' 1"	18' 1"	18' 1"	20' 6"	11' 6"	Ostrander Tunnel.
3rd Subdiv.	20' 5"	20' 5"	20' 5"	19' 11"	19' 8"	19' 4"	19' 1"	18' 9"	18' 6"	18' 2"	18' 2"	18' 2"	20' 6"	11' 6"	Ostrander Tunnel.
3rd Subdiv.	20' 5"	20' 5"	20' 5"	20' 5"	20' 4"	19' 11"	19' 6"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	20' 5"	11' 6"	Bridge 0.59 Cowlitz River near Longview Jct.
4th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Nisqually River Bridge.
5th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Everett Ave. Xing.
5th Subdiv.	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	18' 10"	11' 6"	Seattle Tunnel and Main Street Over Crossing.
6th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
7th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
7th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
8th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
10th Subdiv.	19' 0"	19' 0"	19' 0"	18' 9"	18' 5"	18' 2"	17' 10"	17' 8"	17' 7"	17' 7"	17' 7"	17' 7"	19' 0"	11' 6"	Puyallup River Bridge No. 8.

11th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Steel Truss at North Bend.
12th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Bridge No. 38, Snohomish River.
13th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Bridges Nos. 2 and 18.
14th Subdiv.	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	11' 6"	Fire Escape, Holly St. & Conveyor, Woods Mill, Bellingham.
15th Subdiv.	19' 5"	19' 5"	19' 5"	18' 2"	18' 2"	18' 2"	18' 2"	18' 2"	18' 2"	18' 2"	18' 2"	18' 2"	19' 5"	11' 6"	Olympia Subway.	
16th Subdiv.	17' 10"	17' 10"	17' 9"	17' 9"	17' 8"	17' 7"	17' 6"	17' 5"	17' 4"	17' 4"	17' 4"	17' 4"	17' 10"	11' 6"	Bridge No. 52.1, Satsop River.	
16th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Bridge No. 68, Whiskah River and Br. 72.2, Hoquiam, River.	
16th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Highway Over Crossing at Tumwater.	
16th Subdiv.	17' 2"	17' 1"	16' 11"	16' 9"	16' 6"	16' 4"	16' 1"	15' 11"	15' 10"	15' 10"	15' 10"	15' 10"	17' 2"	11' 6"		
17th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"		
18th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"		
19th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"		
20th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Bridge No. 1.	
21st Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"		
22nd Subdiv.	20' 0"	19' 11"	19' 10"	19' 9"	19' 6"	19' 4"	19' 1"	18' 9"	18' 6"	18' 6"	18' 6"	18' 6"	20' 0"	11' 6"	Tunnel on 6° C. L. near M. P. 24.	
23rd Subdiv.	19' 0"	18' 9"	18' 7"	18' 4"	18' 2"	17' 11"	17' 9"	17' 7"	17' 6"	17' 6"	17' 6"	17' 6"	19' 0"	11' 6"	Bridge No. 1.3, Yakima River.	
24th Subdiv.	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	19' 7"	11' 6"	Bridge No. 4, Naches River.	
24th Subdiv.	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	11' 6"	Flume Crossing near M. P. 7.	

Note—Limit of load measurements based on 52' cars with 42' truck centers. Heights and widths in table allow 6 inches clearance.

MAXIMUM CLEARANCES

Table is based on open car loading equally divided on either side of center line of car.

	LIMIT OF LOAD—MEASUREMENT.										GOVERNING STRUCTURE	
	HEIGHT ABOVE TOP OF RAIL											
	8 ft. 6 in.	9 ft.	9 ft. 6 in.	10 ft.	10 ft. 6 in.	11 ft.	11 ft. 6 in.	Max. Height	Max. Width			
.....	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Bridge No. 17.2, Green River.
.....	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Signal Braces at 14th Ave.
.....	18' 1"	18' 1"	18' 1"	17' 6"	16' 0"	15' 9"	15' 5"	18' 1"	18' 1"	18' 1"	11' 6"	Tunnel No. 3.
1st Subdiv.	16' 9"	20' 6"	20' 6"	20' 6"	20' 5"	20' 2"	19' 10"	20' 6"	20' 6"	20' 6"	11' 6"	Drawbridge No. 39.
2nd Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 3"	19' 10"	20' 6"	20' 6"	11' 6"	Bridge No. 8.78, Puyallup River.
3rd Subdiv.	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	18' 5"	11' 6"	Approach to Drawbridge No. 39 at 15th Street.
3rd Subdiv.	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	18' 8"	11' 6"	Approach to Drawbridge No. 39 at 15th Street.
3rd Subdiv.	17' 10"	17' 6"	17' 2"	16' 10"	16' 5"	15' 11"	15' 5"	20' 6"	20' 6"	20' 6"	11' 6"	Nelson Bennett Tunnel.
3rd Subdiv.	16' 6"	16' 1"	15' 8"	15' 2"	14' 7"	13' 11"	13' 2"	20' 4"	20' 4"	20' 4"	11' 6"	Nelson Bennett Tunnel.
3rd Subdiv.	17' 9"	17' 5"	17' 1"	16' 8"	16' 3"	15' 9"	15' 3"	20' 6"	20' 6"	20' 6"	11' 6"	Ostrander Tunnel.
3rd Subdiv.	17' 10"	17' 6"	17' 2"	16' 9"	16' 4"	15' 11"	15' 5"	20' 6"	20' 6"	20' 6"	11' 6"	Ostrander Tunnel.
4th Subdiv.	18' 11"	18' 9"	18' 7"	18' 4"	18' 2"	17' 11"	17' 9"	20' 5"	20' 5"	20' 5"	11' 6"	Bridge 0.59 Cowlitz River near Longview Jet.
4th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 5"	20' 3"	20' 1"	20' 6"	20' 6"	20' 6"	11' 6"	Nisqually River Bridge.
5th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	Everett Ave. Xing.
5th Subdiv.	18' 10"	18' 10"	18' 7"	18' 1"	17' 7"	17' 1"	16' 7"	18' 10"	18' 10"	18' 10"	11' 6"	Seattle Tunnel and Main Street Over Crossing.
6th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
7th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
7th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
8th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
10th Subdiv.	17' 5"	17' 3"	17' 1"	17' 0"	16' 10"	16' 8"	16' 6"	19' 0"	19' 0"	19' 0"	11' 6"	Puyallup River Bridge No. 8.

11th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
12th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 4"	20' 0"	19' 9"	20' 6"	19' 9"	19' 9"	20' 6"	11' 6"	Steel Truss at North Bend.
13th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 3"	20' 1"	20' 1"	20' 6"	20' 1"	19' 11"	20' 6"	11' 6"	Bridge No. 38, Snohomish River.
14th Subdiv.	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	19' 4"	11' 6"	Bridges Nos. 2 and 18.
15th Subdiv.	17' 3"	17' 0"	16' 9"	16' 6"	16' 4"	16' 1"	15' 10"	19' 5"	15' 10"	15' 10"	19' 5"	11' 6"	Fire Escape, Holly St. & Conveyor, Woods Mill, Bellingham.
16th Subdiv.	17' 3"	17' 3"	17' 2"	17' 1"	17' 0"	17' 0"	17' 0"	17' 10"	17' 0"	16' 10"	17' 10"	11' 6"	Olympia Subway.
16th Subdiv.	20' 6"	20' 3"	20' 0"	19' 9"	19' 6"	19' 3"	19' 0"	20' 6"	19' 0"	19' 0"	20' 6"	11' 6"	Bridge No. 52.1, Satsop River.
16th Subdiv.	20' 5"	20' 2"	19' 11"	19' 8"	19' 5"	19' 2"	19' 0"	20' 6"	19' 0"	19' 0"	20' 6"	11' 6"	Bridge No. 68, Whiskah River and Br. 72.2, Hoquiam River.
16th Subdiv.	15' 8"	15' 7"	15' 5"	15' 3"	15' 1"	14' 10"	14' 8"	17' 2"	15' 1"	14' 10"	17' 2"	11' 6"	Highway Over Crossing at Tumwater.
17th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
18th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
19th Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
20th Subdiv.	19' 1"	18' 10"	18' 6"	18' 3"	17' 11"	17' 7"	17' 3"	20' 6"	17' 3"	17' 3"	20' 6"	11' 6"	Bridge No. 1.
21st Subdiv.	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	20' 6"	11' 6"	
22nd Subdiv.	18' 2"	17' 10"	17' 6"	16' 3"	15' 0"	13' 9"	11' 9"	20' 0"	13' 9"	11' 9"	20' 0"	11' 6"	Tunnel on 6' C. L. near M. P. 24.
23rd Subdiv.	17' 4"	17' 3"	17' 2"	17' 1"	16' 11"	16' 10"	16' 9"	19' 0"	16' 11"	16' 10"	19' 0"	11' 6"	Bridge No. 1.3, Yakima River.
24th Subdiv.	19' 3"	19' 3"	19' 2"	19' 1"	18' 11"	18' 8"	18' 5"	19' 7"	18' 11"	18' 8"	19' 7"	11' 6"	Bridge No. 4, Naches River.
24th Subdiv.	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	20' 1"	11' 6"	Flume Crossing near M. P. 7.

Note—19th Subdivision—Limit of clearance on Government Railway is 20' 6" high for all widths up to 11' 6".

TONNAGE RATINGS—FREIGHT ENGINES

TONNAGE RATING INSTRUCTIONS
This rating is made to govern ruling grades only and will in no manner interfere with handling additional tonnage where the grades will permit.

CLASS OF ENGINE

SUBDIVISION	DISTRICT	5400 H.P. Diesels		Diesel 6000 H.P. 6000-6006		Diesel 6000 H.P. 6007-6020		Z-6-7-8		W 3		W 1 W 2		W		S 4	
		Tons		Tons		Tons		Tons		Tons		Tons		Tons		Tons	
First Eastward	Auburn to Lester.....	4920		5250		5250				1700		1200		1100		800	
	Lester to Easton.....	2250		2250		2400				850		600		550		400	
	Easton to Yakima.....																
First Westward	Yakima to Thrall.....	6000		8500		8500		5000		3125				2100		1550	
	Thrall to Ellensburg.....	7500		8500		8500		6500		4000				3800		2450	
	Ellensburg to Easton.....	6000		8500		8500		5000		2300		1800		1700		1200	
	Easton to Lester.....	2250		2250		2900				850		600		550		400	
Fifth Eastward	Lester to Auburn.....																
	Sumas to Wickersham.....	6500		7500		8500				3150		2600		2500		2000	
	Wickersham to Sedro-Woolley.....	6500		7500		8500				2900		2500		2400		1800	
	Sedro-Woolley to Clear Lake.....	6500		7500		8500				5000		4600		4500		3500	

Fifth Eastward —Continued	Clear Lake to Edgecomb.....	6500		7500		8500				2950		2500		2400		1800	
	Edgecomb to Bromart.....	6500		7500		8500				5000		4700		4600		3000	
	Bromart to Maltby.....	3300		3350		4100				1200		975		900		660	
	Maltby to Woodinville.....	6500		7500		8500				5000		4100		4000		3170	
	Woodinville to Lake.....	6500		7500		8500				3150		2900		2800		2500	
	Lake to Keith.....	5700		7000		8500				2850		2400		2300		1650	
	Keith to Seattle.....	6000		8500		8500				3150		2900		2800		2500	
	Seattle to Interbay.....	6500		7500		8500				5000		4600		4500		3500	
	Interbay to Keith.....	3600		4400		5400				1750		1325		1250		1000	
	Keith to Woodinville.....	7500		8500		8500				3650		3100		3000		2200	
Fifth Westward	Woodinville to Maltby.....	2400		2900		3650				1100		905		830		635	
	Maltby to Bromart.....	5100		6200		7500				2350		1900		1800		1500	
	Bromart to Arlington.....	6500		7500		8500				4150		3700		3600		2700	
	Arlington to McMurray.....	4920		5250		6570				2400		2150		2050		1650	
	McMurray to Sedro-Woolley.....	7500		8500		8500				4150		3700		3600		2500	
Sedro-Woolley to Thornwood.....	4920		5250		6570				2000		1400		1300		1000		
Thornwood to Sumas.....	6500		7500		8500				3150		2600		2500		2000		

TONNAGE RATINGS—FREIGHT ENGINES

SUBDIVISION	DISTRICT	CLASS OF ENGINE													
		Diesel 5400 H. P.		Diesel 6000 H. P. 6000-6006		Diesel 6000 H. P. 6007-6020		W 3		W 1 W 2		W		S 4	
		Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Eleventh Eastward	Woodville to Kirkland.....	4920	5250	6570	2350	1900	1800	1215							
	Kirkland to Black River.....	7500	8500	8500	5000	4600	4500	3500							
Eleventh Westward	Black River to Woodinville.....	7500	8500	8500	2650	2350	2250	1700							
	North Bend to Fall City.....							1585							
Twelfth Eastward	Fall City to Preston.....							580							
	Preston to Woodinville.....							2000							
Twelfth Westward	Woodinville to Issaquah.....							2100							
	Issaquah to Preston.....							550							
Thirteenth Eastward	Preston to Fall City.....							800							
	Fall City to North Bend.....							1600							
	Edgecomb to Getchell.....	4350	4400	5300	1600	1075	1000	750							
	Getchell to Snohomish.....	7500	8500	8500	5000	4600	4500	3500							

Thirteenth Westward	Snohomish to Hartford.....	3500	3700	4500	2150	1800	1700	1200							
	Hartford to Getchell.....	3360	3560	4300	1650	1300	1200	900							
Fourteenth Eastward and Westward	Getchell to Edgecomb.....	7500	8500	8500	5000	4600	4500	3500							
	Arlington and Darrington.....							4500							
Fifteenth Eastward	Bellingham to Larson.....				1050	800	725	555							
	Larson to Wickersham.....				3200	2500	2400	2000							
Fifteenth Westward	Wickersham to Mirror Lake.....				1080	835	760	580							
	Mirror Lake to M. P. 15.....				2650	2250	2150	1500							
	M. P. 15 to Larson.....				2150	1800	1700	1300							
	Larson to Bellingham.....														

TONNAGE RATINGS—FREIGHT ENGINES

TONNAGE RATING INSTRUCTIONS
This rating is made to govern rating grades only and will in no manner interfere with handling additional tonnage where the grades will permit.

SUBDIVISION	DISTRICT	CLASS OF ENGINE						
		4500 H. P. Diesel Tons	A Tons	W 3 Tons	W Tons	Y 2 Tons	S 4 Tons	
Third Eastward	Tacoma to Chehalis.....	6000	5400	4500	3500	2000	1800	
	Chehalis to Napavine.....	3000	2200	1975	1350	1000	850	
	Napavine to Portland.....	.....	.....	.....	.....	.....	3000
Third Westward	Portland to Vader.....	6000	4800	4000	3000	2800	2500	
	Vader to Napavine.....	4000	2630	2350	1700	1500	1000	
	Napavine to Tacoma.....	6000	5400	4500	3500	3300	2500	
Fourth Eastward	Tacoma to South Tacoma.....	2350	1000	900	600	500	400	
	South Tacoma to Rainier.....	4500	3600	3000	2000	1800	1150	
	Rainier to West Tenino.....	6000	5400	4500	3200	.....	.....
Fourth Westward	West Tenino to Rainier.....	4500	3250	2700	1900	1500	1050	
	Rainier to Tacoma.....	6000	5400	4500	3200	3000	1800	
	Palmer Jct. to Tacoma.....	.....	.....	.....	.....	.....	.....
Seventh Westward	Wilkeson and Carbonado to South Prairie.....	.....	.....	.....	.....	.....	2000
	Tacoma to Orting.....	.....	.....	.....	3000	2800	1800
	Orting to South Prairie.....	.....	.....	.....	1500	1400	800
Seventh Eastward	South Prairie to Buckley.....	.....	.....	.....	800	700	400
	Buckley to Palmer Jct.....	.....	.....	.....	1650	1450	800
	South Prairie to Wilkeson.....	.....	.....	.....	.....	.....	400
Wilkeson to Carbonado.....	.....	.....	.....	.....	.....	400	

Sixteenth Westward	St. Clair to Lacey.....	.....	.....	2000	1000	900	800
	Lacey to Olympia.....	.....	.....	3500	2500	2400	.....
	Olympia to Belmore.....	.....	.....	1600	1000	900	600
Sixteenth Eastward	Belmore to Gate.....	.....	.....	3200	1500	1400	1200
	Gate to Hoquiam.....	.....	.....	5000	3500	3300	2200
	Hoquiam to Moclips.....	.....	.....	.....	4000	4000	2500
Seventeenth Eastward	Moclips to Hoquiam.....	.....	.....	.....	4000	4000	2500
	Hoquiam to Gate.....	.....	.....	4500	3500	3300	2000
	Gate to Belmore.....	.....	.....	4250	3700	2500	1500
Seventeenth Westward	Belmore to Olympia.....	.....	.....	.....	.....	.....	.....
	Olympia to Lacey.....	.....	.....	1800	1000	900	550
	Lacey to St. Clair.....	.....	.....	2350	1350	1250	1050
Seventeenth Eastward	Lakeview to Nisqually.....	.....	.....	3500	2500	2300	2000
	Nisqually to Fort Lewis.....	.....	.....	1600	1000	800	550
	Fort Lewis to Murray.....	.....	.....	3000	2000	1800	1500
Seventeenth Westward	Murray to Lakeview.....	.....	.....	3250	2500	2300	2000

TONNAGE RATINGS—FREIGHT ENGINES.

TONNAGE RATINGS INSTRUCTIONS

This rating is made to govern ruling grades only and will in no manner interfere with handling additional tonnage where the grades will permit.

Subdivision	District	CLASS OF ENGINE			
		W-3 Tons	W Tons	Y-2 Tons	S-4 Tons
Eighth Westward	Bagley Jct. to Kanaskat.....	.....	.....	.....	600
	Kanaskat to Bagley Jct.....	.....	.....	.....	400
	Orting to Lake Kapowin.....	.....	.....	.....	600
Eighth Eastward	Centralia to Gate.....	4800	3500	3300	2200
	Grand Mound to Centralia.....	4000	3500	3500	3000
	Rochester to Grand Mound.....	4000	3500	3500	2400
	Gate to Rochester.....	4000	3500	3300	2000
	Elma to McCleary Jct.....	2400	1800	1700	800
Nineteenth Eastward	McCleary Jct. to Stimson.....	2000	1550	1450	.....
	Stimson to Shelton.....	1400	1100	1000	550
	Shelton to Bremerton-Bangor.....	1400	1100	.....	.....
	Bangor-Bremerton to Shelton.....	1400	1100	.....	.....
	Shelton to Marmac.....	2400	1800	1700	400
Nineteenth Westward	Marmac to Stimson.....	750	600	500	.....
	Stimson to Elma, Descending.....	.....	.....	.....	.....

Twenty-First Westward	Chehalis Jct. to Adna.....	.....	2900	2800	2000
	Adna to Pe Ell.....	.....	2500	2500	1400
	Pe Ell to Pluvius.....	.....	1000	900	550
	Pluvius to South Bend.....	.....	.....	.....	.....
Twenty-First Eastward	South Bend to Frances.....	.....	3300	2000	1800
	Frances to Pluvius.....	.....	900	800	500
	Pluvius to Chehalis Jct.....	.....	.....	.....	.....
Twenty-Second Westward	Yacolt to Vancouver Jct.....	.....	.....	.....	1800
	Vancouver Jct. to Homan.....	.....	1000	.....	550
	Homan to Yacolt.....	.....	1500	.....	800

E. M. PRICE,
Assistant Superintendent.

M. L. HARE,
Trainmaster.

W. E. THOMPSON,
Trainmaster.

D. D. ZIMMERMAN,
Trainmaster.

O. A. HANSON,
Trainmaster.

I. W. BREWER,
Assistant Superintendent.

A. B. JOHNSON,
Trainmaster.

S. J. CHARBONEU,
Terminal Trainmaster.

J. O. DAVIES,
Trainmaster.

A. W. ACKLEY,
Chief Dispatcher.