GREAT NORTHERN RAILWAY

CASCA[redacted]VISION.

TIME TA[redacted]LE No. 1.

TO TAKE EFFECT AT TW[redacted]12:01) O'CLOCK A. M.
PA[redacted]

SUNDAY, M[redacted] 30, 1920.

Superseding Time Table[redacted] Supplements thereto.

THIS TIME TABLE IS FOR THE USE OF EMPLOYES ONLY.

C. McDONOUGH, Superintendent.

J. M. DOYLE, Asst. General Superintendent.

A. L. BERGFELD, General Supt. of Transportation.

F. S. ELLIOTT, General Superintendent.

J. H. O'NEILL, General Manager.

FIRST DISTRICT—LEAVENWORTH TO EVERETT JUNCTION.

WESTWARD.

EASTWARD.

Time Table No. 1

In Effect May 30, 1920

SECOND CLASS	FIRST CLASS												FIRST CLASS				
401	1	297	285	25	27	Capacity of Side Tracks		Distance from Leavenworth	STATIONS	Telegraph Calls	Distance from Delta	SIGNS See Rule 2, Page 18.	28	26	300 (N. P. 442)	286	2
Fast Freight	Passenger	N. P. 441 Passenger	Passenger	Passenger	Fast Mail	Passing Tracks	Other Tracks						Express	Passenger	Passenger	Passenger	Passenger
Daily	Daily	Daily	Daily Ex. Sunday	Daily	Daily								Daily	Daily	Daily	Daily Ex. Sunday	Daily
L. 9.00Am	L. 2.00Pm			L. 27 2.40Am	L. 25 2.30Am	60	492	0.0	LEAVENWORTH	CH	109.5	R● DN WCTYOP	A ● 6.00Am	A ● 2.45Pm			A ● 1.20Am
9.20	2.10			2.50	2.38	75		3.2	3.2 TUMWATER	A	106.3	DN P	5.48	2.30			1.09
9.40	26 2.20			2.59	2.44	75		6.3	3.1 DRURY	DY	103.2	DN P	5.40	1 2.20			1.00
10.15	f 2.30			f 3.10	2.52	e82 w82	21	10.5	4.2 CHIWAUKUM	CY	99.0	DN W P	5.30	f 2.10			12.50
10.30	f 2.37			3.20	2.58	76	10	13.0	2.8 WINTON	WI	96.5	DN P	5.23	f 2.04			12.44
10.45	f 2.46			3.29	3.05	77	4	17.5	4.5 NASON CREEK	NC	92.0	DN P	5.10	f 1.55			12.32
10.55	● 2.53			● 3.35	3.11	e79 w76	6	20.5	3.0 MERRITT	CK	89.0	DN W Y P	5.02	f 1.48			12.26
11.40	3.10			3.50	3.25	80		24.9	4.4 GAYNOR	GR	84.6	DN P	4.47	1.39			12.16
12.10Pm	3.19			4.04	3.33	e77 w84	4	28.0	3.1 BERNE	BR	81.5	DN W P	4.37	1.31			12.07Am
26 1.20	● 3.35			28 ● 4.22	● 3.50	e92 w99	88	32.3	4.3 CASCADE TUNNEL	CN	77.2	DN WCT P	25 ● 4.22	401 ● 1.20			●11.55
1.40	● 3.47			● 4.35	28 ● 4.02	85	200	35.9	3.6 TYE	WN	73.6	DN WC P	27 ● 4.02	● 1.03			●11.38
2.00	f 3.57			4.45	4.10	65	21	39.5	3.6 EMBRO	NY	70.0	DN W P	3.45	f12.50			11.19
2.15	4.05			4.53	4.17	76	17	42.2	2.7 COREA	CO	67.3	DN P	3.35	12.40			11.08
2.40	● 4.15			f 5.03	4.25	76	10	45.2	3.0 SCENIC	MA	64.3	DN W P	● 3.25	●12.30			●10.55
2.55	f 4.24			f 5.12	4.33	79	9	48.3	3.1 ALPINE	NI	61.2	DN W P	3.10	f12.15			10.40
3.10	4.33			5.21	4.41	76	12	51.8	3.8 TONGA	G	57.7	DN P	2.55	12.03Pm			10.28
3.30 4.50	● 4.45		L. 6.50Am	5.35 ● 5.40	● 4.55	63	178	57.0	5.2 SKYKOMISH	KY	52.5	R● DN WC Y P	● 2.35 2.30	11.45 ●11.40		● 7.50Pm	10.10 ●10.05
4.05	5.00		f 7.00	5.49	5.02	76	7	61.1	4.1 GROTTO		48.4	P	2.17	11.32		f 7.38	9.55
4.20	5.10		● 7.12	5.58	5.10	86	51	66.1	5.0 HALFORD	SA	43.4	D W P	2.08	11.24		● 7.25	9.45
4.40	● 5.21		● 7.24	6.08	5.19	74	17	71.2	5.1 INDEX	NX	38.3	DN P	1.55	●11.10		● 7.10	9.33
5.00	5.31		f 7.35	6.17	5.27	82	16	76.3	5.1 REITER		33.2	W P	1.44	10.54		f 6.56	9.21
5 20 6 48	401 5.40		● 7.44	6.24	5.35	100	815	80.0	3.7 GOLD BAR	GB	29.5	R DN C Y P	1.35	● 10.45		401 ● 6.48	9.13
	5.45		● 7.50	6.28	5.39		71	82.4	2.4 STARTUP	RU	27.1	P	1.31	10.37		● 6.42	9.09
7.10	● 5.52		● 7.59	6.35	5.46	77	35	85.5	3.4 SULTAN	SU	23.7	D P	1.26	●10.30		● 6.35	9.03
7.35	286 ● 6.10		● 8.16	● 6.50	6.02	104	35	93.5	7.5 MONROE	RO	16.2	DN W Y K P	● 1.12	●10.12		1 ● 6.10	● 8.47
8.00	● 6.25	300 L. 3.50Pm	● 8.33	● 7.04	6.15	76	165	100.2	6.9 SNOHOMISH	HO	9.3	R DN P	●12.55	● 9.58	297 A 3.50Pm	● 5.55	● 8.32
8.20Pm	6.37	A 3.58Pm	f 8.43	7.14	6.25	78	27	106.0	5.8 LOWELL	W	3.5	R DN K P	12.43	9.46	L. 3.40Pm	● 5.43	8.21
	6.40		f 8.48	7.16	6.27	43	140	107.6	1.6 PACIFIC AVENUE	D	1.9	DN P	12.40	9.43		● 5.40	8.18
	● 6.53		● 8.52	● 7.23	● 6.42		8	108.7	1.1 EVERETT		0.8	K P	●12.37	● 9.40		● 5.37	● 8.15
	A 6.55Pm		A 8.55Am	A 7.25Am	A 6.45Am			109.5	.8 EVERETT JUNCTION	JN	0.0	R DN P	L. 12.30Am	L. 9.30Am		L. 5.30Pm	L. 8.10Pm
A 9.00Pm						90	1067	109.3	Via N. P. Ry. DELTA	PG		R● DNWCTYOKP					
Daily	Daily	Daily	Daily Ex. Sunday	Daily	Daily								Daily	Daily	Daily	Daily Ex. Sunday	Daily
401	1	297	285	25	27								28	26	300	286	2
12.00 9.1	4.55 22.3	5.08 35.0	2.05 25.0	4.45 23.0	5.15 25.5				Time Over District Average Speed Per Hour				5.30 19.1	5.15 21.1	5.10 34.8	2.20 22.6	5.10 21.2

ELECTRIC TRAIN STAFF BLOCK SYSTEM. AUTOMATIC BLOCK SIGNALS. STAFF SYSTEM

INITIAL STATIONS.

Leavenworth for trains Nos. 1, 25, 27 and 401.
Everett Jct. for trains Nos. 2, 26, 28 and 286.
Skykomish for trains No. 285.
Snohomish for Nos. 297.
Lowell for Nos. 300.

TERMINAL STATIONS.

Leavenworth for Nos. 2, 26, 28.
Skykomish for train No. 286.
Everett Jct. for trains 1, 25, 27 and 285.
Lowell for Nos. 297.
Snohomish for Nos. 300.
Delta, 401.

Westward trains are superior to eastward trains of the same class.

No. 27 is superior to all other trains. Opposing first class trains will clear No. 27 five (5) minutes.

Other opposing trains will clear No. 27 ten (10) minutes.

All westward trains must be clear at the time No. 27 is due to leave the next station in the rear where time is shown, and not less than five (5) minutes.

Extra trains may pass and run ahead of third class trains.

Automatic block signals in operation between Pacific Avenue and Skykomish (see page 16).

Bulletin boards are located at Leavenworth, Cascade Tunnel, Skykomish, Gold Bar and Delta.

Read carefully rules covering operation electric train staff block, pages 14 and 15.

Electric train staff block system between Everett Jct. and Pacific Avenue and between Skykomish and Leavenworth.

Maximum speed for passenger trains between Leavenworth and Skykomish 35 miles per hour, through Cascade Tunnel 20 miles per hour, between Skykomish and Gold Bar 40 miles per hour, between Gold Bar and Pacific Avenue 50 miles per hour.

J Engines will not exceed speed of forty (40) miles per hour.

L-1, L-2 and M-2 engines will not exceed speed of 25 miles per hour.

F-7, 8 and 9 engines will not exceed speed of 30 miles per hour.

O-1 and P-1 engines will not exceed speed of 30 miles per hour between Skykomish and Gold Bar.

Engines heavier than "F" Class must not exceed speed of 10 miles per hour over bridge 421, 1¼ miles west of Skykomish.

All trains will not exceed speed of 25 miles per hour on curves of 8 degrees and over.

Troop trains handling freight cars must not exceed speed of 25 miles per hour.

All trains will reduce speed to 10 miles per hour over draw bridges.

Trains handling cars loaded with logs which are not secured by chains, must not exceed a speed of twenty miles per hour.

On descending grades of 1.8 per cent and greater, the maximum speed for freight trains must not exceed 15 miles per hour, and on less than 1.8 per cent descending grade to a 1 per cent grade, the speed must not exceed 25 miles per hour, live stock and fruit trains excepted. On a 1 per cent grade and less, 30 miles per hour will be the limit.

It must be understood that the above is maximum speed for freight trains, and that this maximum speed will not be made where track conditions will not warrant, which are regulated by slow orders.

All trains reduce speed to 25 miles per hour over Bridge 444 one mile east of Sultan.

All trains reduce speed to 8 miles per hour through Martin Creek tunnel, and over bridges at both ends.

Passengers trains reduce speed to 25 miles per hour and freight trains to 15 miles per hour through city limits of Monroe.

All trains reduce speed to 10 miles per hour over crossing just east Pacific Avenue freight depot.

Pacific Avenue passing track is the track known as the "C" line on north side of main line. No engine heavier than an F-5 should go in on any of the yard tracks on south side of main line.

Additional to other required tests of the air brake, no train will leave Cascade Tunnel until the air brakes have been carefully tested. Engineer will set the brakes and leave them set until carmen examine each car, then release them, and carmen will again examine each car and see that brakes release before giving the signal to start the train. Conductors must inform engineer how many cars loaded and empty in the train, and how many cars of "air" are working.

All retainers must be used from Cascade Tunnel to Merritt, from Winton to Leavenworth, and from Cascade Tunnel to Skykomish.

Trainmen will keep off top of cars while passing through Cascade Tunnel and through concrete snow shed just west of Tye.

LOCATION OF DISPATCHERS TELEPHONE BETWEEN STATIONS.

60 ft. west of west switch westward passing track Tye; north side of track.
60 ft. east of eastward distant signal Tye, south side of track.
2000 ft. west of west portal Windy Point tunnel 13; south side track.
In watchmans shack west of tunnel 14.
315 ft. from east end of second shed east of Scenic; north side of track.
In middle of first shed east of Chiwaukum.

Trains are operated between a block post, 125 feet west of the east crossover switch Cascade Tunnel and the safety switch west end depot at Tye, by a train staff block system. No train or engine will be run in either direction between the limits mentioned unless train engineman and the engineman of helper engine each has in his possession a section of a staff which will be handed to them by operators and will be retained by them until entire train has cleared block, then sections of staff must be handed to operator. When no helper engine is used, or when any cars behind helper, conductor or brakeman located on rear of train must be in possession of one-half of the staff.

Only one train is permitted to enter or use the block at the same time.

All eastward trains will approach the east end of the concrete shed at Tye under absolute control and will not pass the fouling point of the passing track unless signalled to do so by the Tunnel conductor.

Switch to safety track located at west end Tye depot. Switch must be kept set and locked for safety track. All trains must come to full stop before reaching safety switch and send a brakeman ahead to set switch for main track. After train has passed over, switch must be reset and locked for safety track by operator.

All westward freight trains must stop 15 minutes at Scenic to cool wheels, when Conductor and Brakemen must examine train carefully to discover cracked or broken wheels.

When two trains meeting at Scenic, unless eastward train is to head in, operator will hold the Stop board at west switch at "Stop" until the westward train is into clear of east switch.

All eastward trains will approach east passing track switch at Scenic under absolute control and will not pass the fouling point of the passing track unless signalled to do so by the operator, and operator will not signal them unless he has staff in readiness.

Local freight trains between Skykomish and Delta will carry passengers, when provided with proper transportation.

Miller River, Baring and Heybrooks spur will be flag stops for trains 285 and 286.

No. 2 will stop at stations between Skykomish and Leavenworth for passengers for Twin Cities and east.

Nos. 25 and 26 will stop at Nason Creek and Winton to receive or discharge parcel post mail on request of postal clerks.

Except when displaying signals for following sections, all first class trains will register by card at Gold Bar, Snohomish, Lowell and Everett Jct.

Freight trains will use N. P. tracks between Lowell and Delta and will be governed by N. P. time table and rules between these points.

At Snohomish all N. P. trains will enter and leave G. N. main line through cross-over.

At Lowell all eastward trains from N. P. connection, and first class westward trains for N. P. connection, will run through cross-over. All westward second and inferior class trains for N. P. connection will enter passing track at east switch.

Interlocking plant at bridge 455 just east of Snohomish. No distant signals. Home signals are located 550 feet each way from draw span; derails 55 feet in advance of home signals.

Yard limit boards are placed each way from Gold Bar and Skykomish, east from Cascade Tunnel and west from Leavenworth.

Yard limits extend from Pacific Avenue to N. P. connection at N. P. Freight Depot, and to yard limit board east of Lowell.

Lap sidings: Chiwaukum and Merritt.

BUSINESS TRACKS FIRST DISTRICT NOT SHOWN AS STATIONS ON TIME TABLE.

NAME	LOCATION	OPENS	LENGTH	CAR CAPACITY
Power House Spur	2.0 Miles west of Leavenworth	East		8
Foss River Spur	0.5 Miles west of Tonga	West		3
Great Republic Mining Co., Miller River	1.5 Miles west of Skykomish	West		14
Grotto Lumber Co	0.3 Miles east of Grotto	East		25
G. N. Shingle Co.'s Siding	3.5 Miles west of Grotto	Both ends		24
Baring	3.5 Miles west of Grotto	Both ends		22
Heybrook Spur	2.0 Miles east of Index	West	1,275 feet	5
Index, Galena Mill Spur	0.5 Miles east of Index	East		12

NAME	LOCATION	OPENS	LENGTH	CAR CAPACITY
Wallace Falls Lbr. Co	2.0 Miles east of Gold Bar	Both Ends	2,709	60
Gravel Bunkers	1.0 Miles east of Reiter	Both ends	1,620 feet	34
Sultan Logging Company Connection	2.0 Miles west of Sultan	West		37
Monroe Gravel Pit	0.0 Miles west of Monroe	West		110
Wagner & Wilson Lbr. Co. Spur	Opens off Monroe Gravel Pit Track	West		25
Woodruff	2.0 Miles west of Monroe	Both ends		24
Sumner Iron Works Spur	0.9 Miles east of Pacific Ave	West		25
Everett Power House Spur	0.1 Miles west of Everett	West		2

LOCATION OF TUNNELS.

Tunnel No. 13, 13,873 feet long, height 19 feet, between Tye and Cascade Tunnel
" " 13.1, 1,202 " " " 22 " 1.12 miles east of Embro.
" " 13.2, 458 " " " 22.5 " .20 miles east of Embro.
" " 14, 274.8 " " " 19.1 " 1.18 miles west of Embro

Tunnel No. 15, 1,512 feet long, height 18.7 feet, .66 miles east of Corea.
" " 15.2, 1,248 " " " 22.5 " 1.58 miles east of Scen c.
" " 15.3, 815 " " " 22.5 " 1.59 miles west of Corea.
" " 16 2,368.5 " " " 22 " Everett, Wash

SECOND DISTRICT—EVERETT JUNCTION TO SEATTLE.

Time Table No. 1.

In Effect May 30, 1920.

THIRD CLASS	SECOND CLASS	Capacity of Side Tracks		Distance from Everett Junction	STATIONS	Telegraph Calls	FIRST CLASS								
717	401	Passing Tracks	Other Tracks				357	27	25	285	277	359	1	355	
Mdse. Freight	Fast Freight						Passenger	Fast Mail	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger	
Daily Ex. Sunday	Daily						Daily	Daily	Daily	Daily Ex. Sunday	Daily Ex. Sunday	Daily	Daily	Daily	
L 1.15Pm	L 1.00Am				.....EVERETT JUNCTION.....	JN	L 6.10Am	L 6.45Am	L 7.25Am	L 8.55Am	L 360 9.15Am	L 2.00Pm	L 6.55Pm	L 2 8.07Pm	
s 1.35	1.12		110	3.8	3.8 .....MUKILTEO.....	MU	s 6.19	6.51	7.31	s 9.03	s 9.23	2.06	7.01	f 8.13	
f 1.50	1.25			7.9	4.1 .....MOSHER.....		f 6.27	6.57	7.37	f 9.11	f 9.30	2.11	7.07	8.18	
f 2.05	1.35		8	10.9	3.0 .....MEADOWDALE.....	AD	f 6.33	7.02	7.42	f 9.17	f 9.36	2.16	7.12	8.23	
s 2.40	1.55		157	14.8	3.9 .....EDMONDS.....	DR	s 6.43	7.10	7.50	f 9.24	s 9.45	2.22	7.20	8.30	
s 3.35	2.05		87	17.8	3.0 .....RICHMOND BEACH.....	R	f 6.51	7.15	7.55	f 9.31	s 9.52	2.27	7.25	8.35	
f 4.15	2.45		194	26.9	9.1 .....BALLARD.....	BD	s 7.10	7.30	8.10	f 9.48	s10.11	2.41	7.40	8.50	
A 286 4.30Pm	A 3.00Am	205	633	28.0	1.1 .....INTERBAY.....	RB	s 7.15	7.34	8.14	f 9.53	s10.19	2.45	7.44	8.54	
			285	29.3	1.3 .....G. N. DOCK.....	Z									
			843	32.7	3.4 .....SEATTLE.....	UD	A s 7.30Am	A s 7.50Am	A s 26 8.30Am	A s10.10Am	A s10.35Am	A s 3.00Pm	A s 8.00Pm	A s 9.10Pm	
					.....SEATTLE.....		L 12.30Pm					L 3.30Pm	L 8.20		
			183	72.9	40.2 .....TACOMA.....		s 2.00Pm 2.10					s 4.55 6.05	A s 9.50 Pm		
				214.8	141.9 .....PORTLAND.....		A s 7.10Pm					A s10.50Pm			
Daily Ex. Sunday	Daily						Daily	Daily	Daily	Daily Ex. Sunday	Daily Ex. Sunday	Daily	Daily	Daily	
717	401						357	27	25	285	277	359	1	355	
3.15 8.6	2.00 14.0				Time Over District Average Speed Per Hour		1.20 24.8	1.05 30.2	1.05 30.2	1.15 26.1	1.20 24.6	1.00 32.7	1.05 30.2	1.03 30.5	

Automatic Block Signals. DOUBLE TRACK. Via N.P.Ry.

Special Rules.

Westward trains are superior to eastward trains of the same class.

No. 27 is superior to all other trains. Opposing first class trains will clear No. 27 five (5) minutes.

Other opposing trains will clear No. 27 ten (10) minutes.

All westward trains must be clear at the time No. 27 is due to leave the next station in the rear where time is shown and not less than five (5) minutes.

Extra trains will use double track in direction of Current of Traffic without running orders on receipt of Clearance from Superintendent.

Extra trains may pass and run ahead of third class trains.

Following trains meet and pass on double track between Everett Jct. and Seattle:

No. 25 meets Nos. 360 and 26.

No. 277 meets Nos. 360, 26 and 718.

No. 717 meets Nos. 278 and 286.

No. 285 meets Nos. 360, 26 and 718.

No. 356 meets No. 101.

No. 1 meets No. 2.

No. 355 meets No. 2.

No. 359 passes No. 717 and meets No. 278.

Bulletin boards are located at Interbay and Seattle.

Troop Trains handling freight cars must not exceed speed of 25 miles per hour.

Maximum rate of speed for passenger trains between Everett Jct. and Seattle, 50 miles per hour.

Maximum rate of speed for freight trains between Everett Jct. and Seattle 30 miles per hour.

J Engines will not exceed speed of forty (40) miles per hour.

L-1, L-2 and M-2 engines will not exceed speed of 25 miles per hour.

F-7, 8 and 9 engines will not exceed speed of 30 miles per hour.

All trains will not exceed speed of 25 miles per hour over curves of 8 degrees or over.

All trains will reduce speed to 10 miles per hour over draw bridges.

Trains handling cars loaded with logs which are not secured by chains, must not exceed a speed of twenty miles per hour.

Trains will not exceed speed of 10 miles per hour through Seattle tunnel.

All trains will reduce speed to 8 miles per hour passing through town limits of Edmonds.

Steam Whistle Signals for Tracks with Switches Controlled from Everett Jct. Interlocking Track.

East Bound:—Main Line one long blast; Coast Line one long one short blast.

Ballard, Edmonds and Mukilteo are flag stops for No. 26 to take on passengers for Spokane.

Mile Post 10, south of Richmond Beach, is flag stop for No's 277 and 278.

Ballard is flag stop for No. 2, to take on passengers for Spokane or points east of Spokane.

Ballard is stop for No. 359 Sundays.

No. 358 will stop at any station between Seattle and Vancouver to discharge passengers from south of Seattle.

All G. N. trains between Seattle and Vancouver, Wn., will be governed by time table and rules of N. P. Ry.

All G. N. trains between Vancouver, Wn., and Portland, Ore., will be governed by time table and rules of S. P. and S. Railway.

INITIAL STATIONS.

Seattle for trains Nos. 360, 26, 358, 278, 2, 28, 356, 286.
Interbay for trains Nos. 718.
Everett Jct. for trains Nos. 27, 357, 25, 285, 277, 359, 1, 355, 401, 717.

TERMINAL STATIONS.

Interbay for trains Nos. 401 and 717.
Seattle for trains Nos. 27, 357, 25, 285, 277, 359, 1, 355.
Everett Jct. for trains Nos. 360, 26, 358, 286, 278, 2, 28, 356, 718.

Yard limit boards east of Ballard cover limits to Seattle.

Yard limit board west of Everett Jct.

INTERLOCKING Plant Baskule drawbridge 500 feet west of Ballard.
Distant signals are located 4000 feet east and west of draw span.
Home signals are located 600 feet east and west of draw span.
Derails are located 55 feet inside home signals.
Eastward Distant Signal Connected with Home Signal so Approaching Trains will get a Clear Signal when Route over Bridge is Clear and Home Signal in Clear Position.

FIRST CLASS								Time Table No. 1 In Effect May 30, 1920	Distance from Seattle	SIGNS See Rule 2, Page 18.	SECOND CLASS				THIRD CLASS		
356	28	2	358	286	278	26	360	STATIONS							718		
Passenger	Express	Passenger	Passenger	Passenger	Passenger	Passenger	Passenger								Mdse. Freight		
Daily	Daily	Daily	Daily	Daily Ex. Sunday	Daily Ex. Sunday	Daily	Daily								Daily Ex. Sunday		
A 1.05Am	A 12.30Am	A 355 8.10Pm	A 6.00Pm	A 5.30Pm	A 3.25Pm	A 9.30Am	A 277 9.15Am	EVERETT JUNCTION	32.7	R DN P					A 11.25Am		
s12.55	12.24	8.03	5.53	s 5.21	s 3.16	9.23	s 9.08	3.8 MUKILTEO	28.9	D P					s11.10		
f12.45	12.17	7.56	5.47	f 5.11	f 3.06	9.17	f 8.59	4.1 MOSHER	24.8	P					f10.30		
f12.37	12.12	7.51	5'42	f 5.05	f 3.00	9.12	f 8.51	3.0 MEADOWDALE	21.8	D P					f10.15		
s12.29	12.06	7.45	s 5.36	s 4.58	s 2.53	9.05	s 8.43	3.9 EDMONDS	17.9	D W P					s10.00		
f12.20	12.01 Am	7.40	5.29	s 4.50	s 2.45	8.59	s 8.33	3.0 RICHMOND BEACH	14.9	D P					s 9.30		
s12.03Am	11.48	7.27	5.17	f 4.35	s 2.30	8.47	s 8.18	9.1 BALLARD	5.8	D					f 9.00		
s11.59	11.44	7.24	5.14	f 717 4.30	s 2.25	8.44	s 8.14	1.1 INTERBAY	4.7	R● DNWCTO PK					L 8.50Am		
								1.3 G. N. DOCK	3.4								
L 11.45Pm	L 11.30Pm	L 7.10Pm	L 5.00Pm	L 4.15Pm	L 2.10Pm	L 25 8.30Am	L 8.00Am	3.4 SEATTLE	.0	R DN * IPK							
As 8.00Pm		As 6.50	As 4.40Pm					Via N.P.Ry. SEATTLE	183.1								
6 30 s 6.20		L 5.25Pm	3.20 s 3.10Pm					40.7 TACOMA	142.4								
L 1.00Pm			L 10.00Am					142.4 PORTLAND	.0								
Daily	Daily	Daily	Daily	Daily Ex. Sunday	Daily Ex. Sunday	Daily	Daily								Daily Ex. Sunday		
356	28	2	358	286	278	26	360								718		
1.20 24.6	1.00 32.7	1.00 32.7	1.00 32.7	1.15 26.1	1.15 26.1	1.00 32.7	1.15 26.1	Time Over District Average Speed Per Hour							2.35 10.8		

DOUBLE TRACK. Automatic Block Signals

Automatic Block System.

Automatic Block Signals are in operation between King Street Station, Seattle, and Everett Jct.

Interlocking Signals.

Within the limits of the Automatic Block Signal System Interlocking Plants are located as follows:

SOUTH PORTAL OF SEATTLE TUNNEL.

NORTH PORTAL OF SEATTLE TUNNEL.

EVERETT JUNCTION.

Automatic Block Interlocking Signals and Semaphores

Westward.

Everett Junction interlocking, westward home signal (high line), is located 200 feet from westward crossover switch, and has three arms; the top arm is for main line trains through crossover; the second arm fixed; bottom arm for diverging movements.

Westward Home Signal, Coast line, is located fifty-five feet from east end of eastward crossover switch and has three arms; top arm is for main line; second arm fixed; bottom arm crossover movements.

Distant signals, westward high line, is located 3500 feet from home signal.

First automatic signal westward is 2500 feet west of Everett Junction.

Eastward.

First automatic signal eastward is located 3000 feet from eastward home signal, North Portal.

Eastward home signal, Everett Junction Interlocking is located 200 feet from west end of eastward crossover switch, and has two arms; top arm is for main line to St. Paul; lower arm for crossover up the Coast line.

For Further Instructions and Diagrams see page 16 and 17.

Business Tracks Not Shown as Stations on Time Table.

NAME	LOCATION	OPENS	LENGTH	CAR CAPACITY
G. N. Oil Tank Spur	1.7 miles west of Everett Jct	East		30
Merrill and Ring Spur	2.0 miles west of Everett Jct	West		2
Wasser-Mowatt Lumber Co. Spur	1 mile east of Meadowdale	East		3
Brown Bay Logging Co. Connection	0.5 miles west of Meadowdale	East		2
Invincible Railjoint Spur	0.4 miles west of Edmonds	West		42
Standard Oil Co. Spur	1.0 mile east of Richmond Beach	West	2185	46
G. N. Clay Co. Spur	4.2 miles west of Richmond Beach	East		10
Metum Spur, Oil Spur	1.6 miles east of Ballard	West		43

LOCATION OF TUNNELS.

Tunnel No. 17, 5,141.5 feet long, height 22 feet, Seattle, Wash.

THIRD DISTRICT—EVERETT JUNCTION TO BELLINGHAM.

SOUTHWARD.

Time Table No. 1
In Effect May 30, 1920.

THIRD CLASS		SECOND CLASS			Capacity of Side Tracks		Distance from Bellingham	STATIONS	Telegraph Calls	FIRST CLASS				
717	713	711	729	401	Passing Tracks	Other Tracks				357	277	359	299	355
Mdse. Freight Daily Ex. Sunday	Mdse. Freight Daily Ex. Sunday	Fast Freight Daily	N. P. 676 Freight Daily Ex. Sunday	Fast Freight Daily						Passenger Daily	Passenger Daily Ex. Sunday	Passenger Daily	N. P. 442 Passenger Daily	Passenger Daily
		L 4.35Pm			119	110	0.0	BELLINGHAM	HM	L 2.43Am	L 6.45Am	L 11.50 Am		L 5.30Pm
		4.50			45	143	2.9	SOUTH BELLINGHAM	FN	s 3.05	s 6.55	360 s12.01 Pm		s 5.45
		5.10			54	9	6.9	SOCKEYE		f 3.17	f 7.03	12.09		278 5.53
		278 5.40			53	8	12.5	SAMISH		356 f 3.30	f 7.15	12.22		6.05
						8	13.2	BLANCHARD		f 3.34	s 7.18			6.06
		5.55			65	16	16.6	BOW	BO	f 3.40	712 s 7.25	12.28		6.11
		6.15				8	21.2	BELLEVILLE	BV	f 3.50	f 7.32	12.34		6.17
	714-360 L 11.30Am	355-358 6.25 7.30			63	239	23.8	BURLINGTON	BU	s 4.05	s 7.40	s12.40		711 s 6.29
	s12.01Pm	7.55			42	60	27.9	MT. VERNON	NR	s 4.20	s 7.52	s12.50		s 6.42
	s12.30	8.25			64	19	33.3	FIR	FR	f 4.35	s 8.03	1.00		358 f 6.54
						6	35.0	MILLTOWN		f 4.38	s 8.07			
	359 s 1.15	9.00			67	61	40.4	STANWOOD	B	s 4.55	s 8.16	713 1.15		f 7.07
	s 1.45	9.30			76	14	45.9	SILVANA	NA	712 f 5.10	714 s 8.32	1.24		f 7.20
	f 2.15	10.00			64	16	50.0	ENGLISH		f 5.20	s 8.40	1.30		7.28
	f 2.35	10.20	L 2 16 Pm				53.6	KRUSE	K	5.26	s 8.45	1.34	L 3.02PM	7.33
	s 2.50	10.35	2 30		64	74	57.0	MARYSVILLE	MS	s 5.40	s 8.52	1.40	3.09	f 7.40
L 12.50Pm	A 3.05Pm	A 11.00Pm	A 2 45 Pm	Lv 2.05Am			59.7	DELTA WYE	WY	5.48	s 8.58	1.46	A 3.16Pm	7.47
12.55				2.10	41		60.7	LONG SIDING		5.52	9.01	1.49		7.50
1.05				2.20	65	120	63.3	EVERETT		s 6.07	s 9.13	s 1.58		s 8.05
A 1.15Pm				Ar 2.30Am			64.1	EVERETT JUNCTION	JN	A 6.10Am	360 A 9.15Am	A 2.00Pm		A 8.07Pm
Daily Ex. Sunday	Daily Ex. Sunday	Daily	Daily Ex. Sunday	Daily						Daily	Daily Ex. Sunday	Daily	Daily	Daily
717	713	711	729	401						357	277	359	299	355
0 26 10.6	3 35 10 3	6.25 10.0	.29 12.1	.25 10.6				Time Over District Average Speed Per Hour		3.27 18 4	2.30 25.6	2.10 29 6	.14 27 0	2.37 24.3

Automatic Block Signals

Staff System

Automatic Block Signals

SPECIAL RULES.

Southward trains are superior to northward trains of the same class.

Extra trains may pass and run ahead of third class trains.

Read carefully rules covering operation Electric train staff block, pages 14 and 15.

Electric train staff block system between Delta Wye and Marysville.

Automatic Block Signals in operation between Everett Jct. and Delta Wye and between Marysville and South Bellingham. See page 16.

Bulletin boards are located at Burlington and Bellingham.

Maximum speed for passenger trains between Delta Wye and Samish, 55 miles per hour, between Samish and Bellingham, 40 miles per hour.

Maximum speed for freight trains between Delta Wye and Samish 25 miles per hour, and between Samish and Bellingham 20 miles per hour, between overhead crossing two miles north of Samish and Tunnel 18, in rainy weather, 15 miles per hour.

J Engines will not exceed speed of forty (40) miles per hour.

F-7-8 and 9 engs will not exceed speed of 30 miles per hour.

All trains will not exceed speed of 25 miles per hour over curves of 8 degrees and over.

All trains will reduce speed to 10 miles per hour over draw bridges.

Trains handling cars loaded with logs which are not secured with chains, must not exceed a speed of twenty miles per hour.

All trains run carefully from overhead crossing 2 miles north of Samish to tunnel 18.

All trains reduce speed to 8 miles per hour passing through town limits, Marysville, Mt. Vernon and Burlington.

Trains will not exceed 6 miles per hour on coast line track over 24th St. near Everett flour mill, California St., Hewitt Ave. and Bond St., north and south of passenger depot city of Everett.

Norman, 1 mile north of Silvana, is flag stop for Nos. 277 and 278.

Stanwood will be stop for No. 355 and No. 358 Sundays.

At Kruse all N. P. trains will enter and leave G. N. main line, through cross-over.

Except when displaying signals for following sections, first class trains will register by card at Kruse, Delta Wye and Everett Jct.

Normal position of gates at crossing of third and fourth districts at Burlington, will be against fourth district trains. Not necessary to stop for crossing when gates are set against opposing district.

South switch Everett passing track, is located 300 feet north of station platform.

Track lying to the south of cross-over, between round house and depot Bellingham, will be known as passing track.

Steam whistle signals for tracks with switches controlled from Delta Wye Interlocking Tower.

Main Line—One Long.
Delta Yard from North—One Long, One Short.
Delta Yard from South—Two Long, One Short.
Delta Yard North—Two Long.
Delta Yard South—Three Long, One Short.
Northward from Northern Pacific connection, One Long, One Short, One Long.
Southward for Northern Pacific connection, Two Long, One Short, One Long.

INTERLOCKING SYSTEM.—Governing movement of trains N. P. crossing and Bridge 10 just north of Delta Wye.

All southward trains will be governed by a two arm home signal located 700 feet north of draw span. Top arm at 90 degrees up proceed to two arm home signal located 20 feet north of N. P. crossing, top arm at 90 degrees up proceed to Bayside, lower arm 90 degrees up proceed to Delta yard. A caution fixed signal is located 2500 feet north of two arm home signal.

Train movements from Bayside northward will be governed by top arm on home signal located 60 feet south of wye switch and by home signal located on trestle 500 feet south of draw span.

Train movements from Delta northward will be governed by top arm on home signal located 60 feet east of wye switch, and by home signal located on trestle 500 feet south of draw span.

Trains between Delta and Bayside will be governed by lower arm home signal located 60 feet east of wye switch.

Trains northward from Northern Pacific connection to Great Northern main line governed by lower arm on Home Signal on Northern Pacific track. Top arm on advanced Home Signal 500 feet south of draw span.

Southward trains for Northern Pacific connection to be governed by lower arm on Home Signal 700 feet North of draw span.

Staff crane for trains from Northern Pacific connection northward is located on Northern Pacific track on trestle.

Interlocking system in use bridge 10, 11 and 12 between Delta and Marysville and at Skagit R. R. Crossing one mile south of Fir.

Interlocker at Drawbridge No. 36 one mile north of Mt. Vernon. Derails are located 500 feet from end of draw span.

FIRST CLASS					Time Table No. 1 In Effect May 30, 1920	Distance from Everett Junction	SIGNS See Rule 2, Page 18.	SECOND CLASS		THIRD CLASS	
298	358	278	360	356	STATIONS			712	728	714	718
N. P. 441 Passenger	Passenger	Passenger	Passenger	Passenger				Fast Freight	N. P. 675 Freight	Mdse. Freight	Mdse. Freight
Daily	Daily	Daily Ex. Sunday	Daily	Daily				Daily	Daily Ex. Sunday	Daily Ex. Sunday	Daily Ex. Sunday
	\ s 8.15Pm	\ s 6.15Pm	\ s12.15Pm	A s 4.10Am	BELLINGHAM	64.1	R* DN CWTKP	\ 8.45Am			
	s 8.00	s 6.02	359 s12.01Pm	s 4.00	2.9 SOUTH BELLINGHAM	61.2	D O K P	s 8.30			
	7.52	355 f 5.53	f11.51	f 3.50	4.0 SOCKEYE	57.2	P	f 8.15			
	7.44	711 f 5.40	11.38	357 3.30	5.6 SAMISH	51.6	W P	f 7.55			
		s 5.38	s11.34	f 3.26	0.7 BLANCHARD	50.9	P				
	7.32	f 5.31	s11.28	f 3.20	3.4 BOW	47.5	D P	277 s 7 25			
	7.24	f 5.22	f11.19	f 3.07	4.6 BELLEVILLE	42.9	P	f 7.05			
	711 s 7.19	s 5.16	713 s11.13	s 3.00	2.6 BURLINGTON	40.3	R DNCOWYXIKP	s 6.50		713 A s11.30Am	
	s 7.06	s 5.03	714 s11.00	s 2.45	4.1 MT. VERNON	36.2	DN P	6.10		360 s11.00	
	355 6.54	s 4.50	s10.41	f 2.30	5.4 FIR	30.8	D P	5.55		s10.10	
		s 4.45	s10.35	f 2.25	1.7 MILLTOWN	29.1					
	6.43	s 4.35	s10.26	s 2.15	5.4 STANWOOD	23.7	DN P	5.35		s 9.30	
	6.34	s 4.20	s10.12	f 2.00	5.5 SILVANA	18.2	D W P	357 5.10		277 s 8.32	
	6 28	s 4.10	f10.01	f 1.49	4.1 ENGLISH	14.1	P	4.50		f 8 05	
\ 4 26Pm	6 23	s 4 02	9.53	1 40	3.6 KRUSE	10.5	R DN P	4 30	\ 8.25Am	f 7.45	
4 19	6.18	s 3.54	s 9.48	s 1.34	3.4 MARYSVILLE (Staff System)	7.1	DN P	4.15	8.13	s 7.30	
L. 4:12Pm	6.12	3.43	9.38	1.23	2.7 DELTA WYE (Staff System)	4.4	R DN IY P	L. 4.00Am	L. 8 00Am	L. 7.00Am	A 11.50Am
	6.09	3.40	9.35	1.20	1.0 LONG SIDING (Automatic Block Signals)	3.4					11.40
	s 6.05	s 3.35	s 9.30	s 1.15	2.6 EVERETT (Automatic Block Signals)	0.8	P				11.30
	L. 6 00Pm	L. 3.25Pm	L. 9.15Am	L. 1.05Am	0.8 EVERETT JUNCTION (Automatic Block Signals)	0.0	R DN P				L. 11.25Am
Daily	Daily	Daily Ex. Sunday	Daily	Daily				Daily	Daily Ex. Sunday	Daily Ex. Sunday	Daily Ex. Sunday
298	358	278	360	356				712	728	714	718
14 27 0	2 15 28.5	2.55 23 0	3 0 21 5	3.05 21.0	Time Over District Average Speed Per Hour			4 45 13 4	25 15 0	4 30 8 0	0 25 10.6

Automatic Block Signals

Interlocking Plant at crossing of Pacific Northwest Traction Company just north of Burlington. Home signals are located 208 feet north and south of crossing. Derails are located 58 feet inside of home signals. Home Signals are pipe connected.

Mt. Vernon interlocking plant 1 mile north of Mt. Vernon, crossing the P. S. & C. Ry. South derail is located 255 feet south of crossing. North derail located 400 feet north of crossing. North bound home signal is located 260 feet south of crossing. South bound home signal located 458 feet north of crossing. All signals standard indications and are a part of the automatic block system. A switch opening south leading to the P. S. & C. Ry. yards is located with head block 450 feet south of crossing. A pipe connected derail is located 185 feet from head block in on this spur. An automatic dwarf signal is located at this derail for south bound train movements coming out of this spur and will show caution when switch is opened and no train standing between north bound home signal and Mt. Vernon. This dwarf signal is part of automatic block signal system.

INITIAL STATIONS.

Blaine for train No. 711.
Delta Wye, for trains Nos. 298, 728, 712, 714, 717 and 401.
Everett Jct., for trains Nos. 358, 360, 356, 278 and 718.
New Westminster, for trains Nos. 98, 102 and 104.
Vancouver, for trains Nos. 97, 359, 355, 357, 101, 103 and 719.
Bellingham, for trains Nos. 277 and 720.
Kruse, for trains Nos. 299 and 729.
Burlington No. 713.

TERMINAL STATIONS.

Blaine, for train No. 712.
Delta Wye, for trains Nos. 299, 729, 711, 713 and 718.
Everett Jct., for trains Nos. 359, 355, 357, 277, 401 and 717.
New Westminster, for trains Nos. 97, 101 and 103.
Vancouver, for trains Nos. 98, 356, 358, 360, 102, 104 and 720.
Bellingham, for trains Nos. 278 and 719.
Kruse, for trains Nos. 298 and 728.
Burlington No. 714.

YARD LIMITS

Yard limits extend from yard limit board north of Roundhouse, Bellingham, to yard limit board, south of South Bellingham.

Yard limit boards placed each direction from Burlington.

Everett yard limits include Delta yard and from North end of draw bridge 11 to yard limit board west of Everett Jct.

Business tracks not shown as stations on time table.

NAME	LOCATION	OPENS	LENGTH	CAR CAPACITY
Coast Clay Spur	Leads off of Chuckanut Spur	South		22
Chuckanut Quarry Spur	1.0 Miles north of Sockeye	North		24
Chuckanut Cannery Spur	0.7 Miles north of Sockeye	North		7
Blanchard Spur	0.5 Miles south of Samish	North		35
Bloedel-Donovan Spur	1.3 Miles north of Bow	North		61
Bellville Pit	1.5 Miles north of Bellville	North		80
Everett Pulp and Paper Co., Spur	1.7 Miles north of Mt. Vernon	South		4
Puget Sound and Cascade Ry. Conn	1.0 Mile north of Mt. Vernon	South		
Skagit Crossing Tr. Track	0.9 Miles south of Fir	South		2
Hawley Spur	1.3 Miles south of Fir	North		6

LOCATION OF TUNNELS.

Tunnel No. 18, 1,112.9 feet long, height 21.8, .46 miles north Samish.
" " 19, 141.5 " " " 21.3, .62 " south Sockeye.

Business tracks not shown as stations on time table.

NAME	LOCATION	OPENS	LENGTH	CAR CAPACITY
Morrison Mill Spur	2.1 Miles south of Fir	South		8
Ketchum Spur	2.5 Miles north of Stanwood	South		3
Hals Spur	1.18 Miles south of Stanwood	South		2
Norman Spur	1.1 Miles north of Silvana	South		2
Kennedy Spur	4.2 Miles north of Marysville	South		6
Kruse Bros. Spur	2.5 Miles north of Marysville	South		2
Cox's Spur	1.4 Miles north of Marysville	South		4

LOCATION OF TUNNELS.

Tunnel No. 20, 326.5 feet long, height 20.9, .43 miles south Sockeye.
" " 21, 697.6 " " " 21. .32 " " South Bellingham.

THIRD DISTRICT—VANCOUVER TO BELLINGHAM.

THIRD CLASS			SECOND CLASS					Capacity of Side Tracks		Distance from Vancouver	Time Table No. 1 In Effect May 30, 1920	Telegraph Calls	FIRST CLASS								
	719	103					711	Passing Tracks	Other Tracks		STATIONS		357	101	359	355	97				
	Mdse. Freight Daily Ex. Sunday	C. N. P. Ry. 202 Freight Daily					Fast Freight Daily						Passenger Daily	C. N. P. Ry. 2 Passenger Daily	Passenger Daily	Passenger Daily	C. N. P. Ry. 38 Passenger Daily				
	L 356 8.00Am	L 1.00Am						33	319	0.0	VANCOUVER	VN	L 104 12.01Am	L 9.00Am	L 9.30Am	L 3.00Pm	L 102 7.00Pm				
	f 8.20	1.15								2.7	2.7 STILL CREEK		f12.11	9.11	9.40	3.10	7.11				
	f 8.25	1.20								4.6	1.9 ARDLEY	Double Track	f12.15	9.16	9.44	3.14	7.16				
	f 8.35	1.30							39	7.2	2.6 BURNABY		f12.21	9.22	9.48	3.18	7.22				
	f 8.45	1.40								10.9	3.7 ENDOT		12.27	9.28	9.54	3.24	7.28				
	s 9.05	1.55						27	55	12.4	1.5 SAPPERTON		12.30	9.31	9.57	720 3.27	7.31				
	s 9.10	A 2.00Am							52	13.1	0.7 NEW WESTMINSTER	MN	s12.38	A s 9.35Am	98 s10.02	s 3.33	A 7.35 Pm				
	f 9.15									13.5	0.4 FRASER RIVER JCT		12.43		10.07	3.38					
	f 9.30							64	3	18.7	5.2 TOWNSEND		f12.52		f10.15	3.46					
	s 9.50							65	59	24.1	5.4 COLEBROOK	G	s 1.02		s10.23	f 3.54					
	f10.00								24	27.7	3.6 CRESCENT		f 1.10		s10.30	f 4.01					
	s10.40							65	21	32.5	4.8 WHITE ROCK	WR	s 1.35		s10.55	s 4.26					
										35.5	3.0 INTERNATIONAL BOUNDARY										
	350 s10 50 -720 11.45						L 2.30Pm	62	124	36.0	0.5 BLAINE	BN	s 1.55		719 s11.05	s 4.48					
	360 s12 55Pm						s 3.00	76	40	43.5	7.5 CUSTER	CU	f 2.10		720 s11.22	5.01					
									3	46.2	2.7 ENTERPRISE		f 2.17		f11.26						
	s 1.40						s 3.25	75	38	49.1	2.9 FERNDALE	FD	s 2.23		s11.32	s 5.13					
									30	51.3	2.2 BRENNAN		2.28		f11.38						
	A s 2.30Pm						A 4.10Pm	119	110	58.1	6.8 BELLINGHAM	HM	A s 2.43Am		A s11.50Am	A s 5.30Pm					
	Daily Ex. Sunday	Daily					Daily						Daily	Daily	Daily	Daily	Daily				
	719	103					711						357	101	359	355	97				
	6.30 9.0	1.00 13.1					1.40 13.3				Time Over District Average Speed Per Hour		2.42 22.3	.35 22.9	2.20 25.0	2.30 23.2	.35 22.9				

Special Rules.

Southward trains are superior to northward trains of the same class.

Extra trains may pass and run ahead of third class trains.

Double track between Still Creek and Endot. Normal position of switch at Still Creek is for southward trains and at Endot for northward trains.

Extra trains will use double track in direction of current of traffic without running orders on receipt of clearance from Superintendent.

No. 355 meets No. 360 on double track between Still Creek and Endot.

Bulletin Boards are located at Bellingham and Vancouver.

Maximum rate of speed for passenger trains between Bellingham and Vancouver, 45 miles per hour.

J Engines will not exceed speed of forty (10) miles per hour.

F-7-8 and 9 engs. will not exceed speed of 30 miles per hour.

All trains will not exceed speed of 25 miles per hour, on curves of 8 degrees and over, and between mile post 139 and bridge 77, Fraser River.

All trains will reduce speed to 10 miles per hour over draw bridges.

Trains handling cars loaded with logs which are not secured by chains, must not exceed a speed of twenty miles per hour.

On descending grades of 1.8 per cent and greater, the maximum speed for freight trains must not exceed 15 miles per hour, and on less than 1.8 per cent descending grade to a 1 per cent grade, the speed must not exceed 25 miles per hour, live stock and fruit trains excepted. On a 1 per cent grade and less, 30 miles per hour will be the limit.

It must be understood that the above is maximum speed for freight trains, and that this maximum speed will not be made where track conditions will not warrant, which are regulated by slow orders.

Trains must not exceed speed of 10 miles per hour over Brunette Street at Sapperton.

All trains reduce speed to 10 miles per hour between Mile Post 123 and Mile Post 127, between White Rock and Crescent.

All trains reduce speed to 8 miles per hour through city limits at Blaine.

All trains will come to a full stop within 50 feet of home signal on either side of Frazer River bridge, and will not proceed until clear signal is displayed, and will not exceed a speed of 6 miles per hour over this bridge.

Ocean Park, 1 mile south of Crescent, will be flag stop for No's 356 and 357.

No. 355 will register by card at Colebrook.

The normal position of switches at Colebrook Jct., Guichon line Jct., and Frazer River Jct. will be for main line.

Track lying to the north of cross-over between round house and depot, Bellingham, will be known as passing track.

Semaphores for protection of draw, Frazer River bridge, between Frazer River Jct. and New Westminster, are located on north and south end of bridge.

Retaining wall, New Westminster, between Front St., crossing and old interlocking tower, does not give full side clearance. Train and engine men must not hang on side of cars or engines passing same.

No trains in either direction will pass International Boundary at Blaine and White Rock without permission of Customs officials.

Yard limit boards at Bellingham, Blaine and Vancouver.

Yard limit board at Sapperton Sand Pit North of Wye, covers limits to Fraser River Bridge.

FIRST CLASS 358 Passenger Daily	102 C. N. P. Ry. 1 Passenger Daily	360 Passenger Daily	98 C. N. P. No. 37 Passenger Daily	356 Passenger Daily	Time Table No. 1. In Effect May 30, 1920 STATIONS	Telegraph Calls	Distance from Bellingham	SIGNS See Rule 2, Page 18.	SECOND CLASS 712 Fast Freight Daily	THIRD CLASS 720 Mdse. Freight Daily Ex. Sunday	104 C.N.P.Ry. 201 Freight Daily
A s10.45Pm	A s 97 7.00Pm	A s 3.30Pm	A s11.00Am	A s 719 8.00Am	VANCOUVER	VN	58.1	R⊕ DN WCYTOPK		A s 4.30Pm	A s 357 11.55Pm
10.30	6.46	f 3.12	10.44	f 7.40	2.7 STILL CREEK		55.4	P		f 4.15	11.40
10.26	6.41	f 3.07	10.38	f 7.35	1.9 ARDLEY		53.1	P		f 4.08	11.32
10.21	6.35	f 2.59	10.30	f 7.28	2.6 BURNABY		50.9	P		f 4.00	11.23
10.15	6.28	2.47	10.19	7.21	3.2 ENDOT		47.7	P		f 3.48	11.10
10.11	6.23	f 2.42	10.14	f 7.17	2.0 SAPPERTON		45.7	W I Y PK		s 355 3.27	11.00
•10.08	L 6.20Pm	s 2.40	L 359 10 12Am	s 7.15	0.7 NEW WESTMINSTER	MN	45.0	R DN I PK		s 3.17	L 10.55Pm
9.59		2.30		7.05	0.4 FRASER RIVER JCT		44.6			f 3.12	
9.51		f 2.20		f 6.55	5.2 TOWNSEND		39.4	P		f 3.00	
s 9.43		s 2.10		s 6.42	5.4 COLEBROOK	G	34.0	R DN W Y P		s 2.40	
f 9.35		f 2.02		f 6.20	3.6 CRESCENT		30.4			f 2.15	
s 9.11		s 720 1.35		s 5.55	4.8 WHITE ROCK	WR	25.6	DN P		s 360 1.35	
					3.0 INTERNATIONAL BOUNDARY		22.6				
s 9.00		s 1.15		s 5.25	0.5 BLAINE	BN	22.1	R DN W T P	A 10.25Am		s12.40Pm 719 11.45
f 8.42		s719 12.55		s 4.54	7.5 CUSTER	CU	14.6	D P	s10.05		359 s11.22
8.35		f12.47		f 4.46	2.7 ENTERPRISE		11.9				
s 8.32		s12.42		s 4.40	2.9 FERNDALE	FD	9.0	D P	s 9.40		s10.45
8.24		f12.35		4.29	2.2 BRENNAN		6.8				
L 8.15Pm		L 12.20Pm		L 4.15Am	6.8 BELLINGHAM	HM	0.0	R⊕DN WC T PK	L s 9.00Am	L	9.55Am
Daily	Daily	Daily	Daily	Daily					Daily	Daily Ex. Sunday	Daily
358	102	360	98	356					712	720	104
2.30 23.2	20.9	3.10 18.3	17.5	3.45 15.6	Time Over District Average Speed Per Hour				1.35 15.8	6.35 8.9	1.00 13.1

New Westminster Interlocking System.—Signal tower is located 4600 feet north of north end of Fraser River bridge. This apparatus controls the crossing of the C. P. Ry., also switches leading to and from the Fraser River Bridge tracks and New Westminster.
South derail is 1600 feet south of tower.
North derail is 625 feet north of tower.
Northward home signal is located to the left of the track and is 1655 feet south of tower.
Southward home signal is located 675 feet north of the tower. Distant signals are located 1200 feet north and south of home signals.
This plant has two advance home signals governing train movements over switches at north and south end of plant. North of plan this signal is located to the left of the track top arm for main line, lower arm for diverging track leading to Fraser Mills. South of plan top arm for main line, lower arm for track leading to water front and freight house.

Interlocking plants are in use on bridges 69 and 70 between Crescent and Colebrook. Home signals and derails are located 600 feet north and south of both bridges. The caution fixed signals are located 3000 feet from home signals.

Interlocking plant at Ardley, B. C., governing movement of G. N. Ry., trains and B. C., Electric Railway Company trains: Northward home signal is located 558 feet from crossing. Derail is 58 feet ahead of signal. Northward distant signal is located 2000 feet from home signal. Southward home signal is located 558 feet from crossing and has two arms. Derail is 58 feet ahead of signal. Southward distant signal is located 2000 feet from home signal.

Burrard Inlet Interlocking plant crosses the C. P. Ry. and B. C. Electric Ry. at Burrard Inlet, Vancouver. South derail is located 200 feet south of B. C. Electric crossing. North derails are located 200 feet north of C. P. Ry. crossing. Northward home signal is 258 feet south of B. C. Electric crossing. Southward home signal is 210 feet north of C. P. Ry. crossing. No distant signals at this plant.

Business tracks not shown as stations on time table.

NAME	LOCATION	OPENS	Length	Car Capacity
Maddoughs-Shaw Spur	0.7 Miles north of Ardley	South		5
Ardley Power Spur	0.3 Miles south of Ardley	South		2
Haight Spur	1.5 Miles north of Sapperton	South	450	7
Bradford and Taylor	0.7 Miles north of Sapperton	South		4
St. Mingo Spur	1.0 Mile north of Townsend	North		23
Delta Shingle Co. Spur	0.8 Miles south of Townsend	North		10
Mosher Lumber & Logging Spur	2.2 Miles south of Townsend	South	630	16
Squires Spur	2.0 Miles north of Colebrook	South		2
Campbell Lumber Co. Spur	1.0 Miles south of Whiterock.	South	2450	62
Dakota Creek Spur	2.0 Miles south of Blaine	North		30
Blaine Shingle Co.'s Spur	2.0 Miles south of Blaine	South		9
Drayton Bay Shingle Spur	400 ft. south of Blaine	North		4
McDonald Spur	1.2 Miles north of Custer	South		2
Enterprise Spur	0.7 Miles north of Enterprise.	South		3
Sand Pit Spur	0.8 Miles south of Enterprise.	South		13
Milk Spur	0.3 Miles south of Ferndale	South		28
Marietta Spur	3.3 Miles north of Bellingham.	South		2

WESTWARD. FOURTH DISTRICT—ANACORTES TO ROCKPORT. EASTWARD.

THIRD CLASS	SECOND CLASS	FIRST CLASS		Capacity of Side Tracks		Distance from Rockport	Time Table No. 1 Effective May 30, 1920 STATIONS	Telegraph Calls	Distance from Anacortes	SIGNS See Rule 2, Page 18.	FIRST CLASS		SECOND CLASS	THIRD CLASS
723	377	289	279	Passing Tracks	Other Tracks						290	280	378	724
Mdse. Freight Daily Ex. Sunday	Mixed Daily Ex. Sunday	Passenger Daily	Passenger Daily								Passenger Daily	Passenger Daily	Mixed Daily Ex. Sunday	Mdse. Freight Daily Ex. Sunday
L 6.30Am		L 724 4.30Pm	L 9.25Am	39			ROCKPORT	RK	53.7	R D Y W	A s 1.30Pm	A s 9.10Pm		A 289 4.30Pm
f 6.50		f 4.45	f 9.40	16		5.8	5.8 FABER		47.9		f 1.12	f 8.55		f 4.00
s 7.25		s 4.57	s 9.52		83	9.1	3.3 CONCRETE	BA	44.6	D	s 1.00	s 8.47		s 3.30
s 7.50		f 5.00	f 9.55	39	76	10.2	1.1 GRASSMERE		43.5	W	f12.50	f 8.39		f 2.40
f 8.20		s 5.12	s10.08	41		15.5	5.3 BIRDSVIEW		38.2		s12.38	s 8.27		f 2.15
s 8.50		s 5.25	s10.21	35	9	20.6	5.1 HAMILTON	H	33.1	D W	s12.25	s 8.15		s 1.40
s 9.15		s 5.37	s10.34		25	23.9	3.3 LYMAN	MY	29.8	D	s12.15Pm	s 8.06		s 1.10
f 9.35		f 5.48	f10.45	21		29.2	5.3 COKEDALE JUNCTION		24.5		f11.58	f 7.54		f12.40
s10.00	L 9.15Am	s 6.00	s10.55	42	63	32.4	3.2 SEDRO-WOOLLEY	SW	21.3	D X R I K	s11.50	s 7.46	A s 8.30Am	s12.25
						34.7	2.3 STERLING		19.0					
A s10.25Am	s 9.35 290 10.55	s 6.20 280 7.25	11.10 290 11.30	63	225	37.2	2.5 BURLINGTON	BU	16.5	R DN CO WYX IK	11.30 279 10.55 377	7.30 289 5.50	8.10 s 7.20	L 12.01Pm
	s11.05	s 7.33	s11.38		16	40.0	2.8 AVON		13.7		s10.46	s 5.39	s 7.05	
	f11.15	f 7.40	f11.45		7	42.6	2.6 FREDONIA		11.1		f10.40	f 5.32	f 6.57	
	s11.25	s 7.47	s11.52		17	44.1	1.5 WHITNEY		9.6		s10.35	s 5.25	s 6.50	
						46.8	2.2 DRAW BRIDGE		7.4					
	f11.45	f 8.03	f12.08Pm		3	49.6	3.3 FIDALGO		4.1		f10.21	f 5.11	f 6.20	
	A s12.05Pm	A s 8.15Pm	A 12.20Pm		235	53.7	4.1 ANACORTES	AC		R D T W	L 10.10Am	L 5.00Pm	L 6.00Am	
Daily Ex. Sunday	Daily Ex. Sunday	Daily	Daily								Daily	Daily	Daily Ex. Sunday	Daily Ex. Sunday
723	377	289	279								290	280	378	724
3.55 9.5	2 50 6.7	2.40 19.6	2.55 18 5				Time Over District Average Speed Per Hour				3 20 16 1	4.10 13.0	2.30 8.05	4 29 8 4

Special Rules.

Westward trains are superior to eastward trains of the same class.

Extra trains may pass and run ahead of third class trains.

Bulletin boards are located at Anacortes, Burlington and Rockport.

Maximum rate of speed for passenger trains between Anacortes and Rockport, 30 miles per hour. Freight trains 15 miles per hour.

All trains will not exceed speed of 25 miles per hour on all curves of 8 degrees and over.

All trains will reduce speed to 10 miles per hour over draw bridges.

J Engines in Passenger Service will not exceed a speed of forty (40) miles per hour.

No Engine heavier than F5 should cross bridge 52 near Concrete. Engines heavier than Standard reduce speed to 8 miles per hour over same.

No Engine heavier than F1 must cross Drawbridge 12 two miles west of Whitney. Engines heavier than Standard reduce speed to 8 miles per hour over same.

First class trains will stop on flag at Fidalgo Mill Spur, Summitt Park, Minkler, Superior Ave., East Concrete, Van Horn, Sauk and Cowdens Spur.

Normal position of gates at crossing third and fourth districts at Burlington, will be against fourth district trains.

Normal position of gates at crossing Puget Sound and Baker River Railway two miles east of Burlington will be clear for Great Northern trains. Not necessary to stop when gates are clear and set against P. S. & B. R. Ry.

Interlocking Plant one half mile west of Sedro-Woolley at crossing of Pacific Northwest Traction Company. Distant signals are located 2000 feet east and west of crossing and have one arm showing caution. Home signals are located 208 feet east and west of crossing. Derails are located 58 feet inside of Home Signals.

Interlocking Plant just west of Burlington at crossing of Pacific Northwest Traction Company eastward distant signal is located 2000 feet west of crossing, has one arm showing caution. Home signals are located 55 feet each way from crossing. Derails are located 5 feet inside of home signals. There is no distant signal for westward trains.

INITIAL STATIONS.

Anacortes, for trains Nos. 290, 280 and 378.
Rockport, for trains Nos. 279, 289 and 723.
Burlington, for train No. 724.
Sedro-Woolley, for train No. 377.

TERMINAL STATIONS.

Anacortes, for trains Nos. 279, 289 and 377.
Rockport, for trains Nos. 280, 290 and 724.
Burlington, for train No. 723.
Sedro-Woolley, for train No. 378.

Yard limit boards are located at Anacortes, Burlington and Sedro-Woolley.

Business tracks not shown as stations on time table.

NAME	LOCATION	OPENS	LENGTH	CAR CAPACITY
Briscoe Spur	1.8 Miles west of Rockport	West		14
Sauk Spur	2.0 Miles west of Rockport	West		7
Cowden's Spur	3.5 Miles West of Rockport	East		9
Van Horne's Spur	1.5 Miles west of Faber	East		15
Vix Spur	1.5 Miles west of Faber	West		24
Washington Port Cement Co	0.7 Miles east of Concrete	West		110
Superior Portland Cement Co. Spur	0.7 Miles west of Concrete	East		57
Burpee Shingle Spur	0.4 Miles west of Grassmere	West		5
Kirby Spur	1.5 Miles east of Birdsview	West		2
Lyman Lbr. Co.	2.0 Miles east of Birdsview	West	750	17
L. L. Spur	0.2 Miles west of Hamilton	West		2
Hop Ranch Spur	0.8 Miles east of Lyman	West		3
Skagit Mill Co. Spur	Lyman	West		39
Duncan Spur	1.0 Miles east of Cokedale	West		2
Minkler's Mill	3.0 Miles east of Cokedale Jct	Both Ends		13
Sound Iron Spur	Woolley	West		7
Holbrook's Spur	0.4 Miles west of Woolley	West		8
Burlington Mill Spur	0.6 Miles west of Burlington	West		8
Callahan-Abbott Spur	Fredonia	West		7
Gravel Pit Spur	5.9 Miles east of Anacortes	West		14
Fidalgo Island Shingle Co. Spur	4.6 Miles east of Anacortes	East		2
Log Rollway	2.7 Miles east of Anacortes	Both Ends		21
Fidalgo Mill Spur	2.1 Miles east of Anacortes	East		4

WESTWARD. FIFTH DISTRICT—SUMAS TO GUICHON. EASTWARD.

SECOND CLASS. 385 Mixed Daily Ex. Sunday	Capacity of Side Tracks: Passing Tracks	Capacity of Side Tracks: Other Tracks	Distance from Sumas.	Time Table No. 1 Effective May 30, 1920 — STATIONS.	Telegraph Calls	Distance from Guichon	SIGNS. See Rule 2. Page 18.	SECOND CLASS. 386 Mixed Daily Ex. Sunday
L 9.30Am			0.0	SUMAS, WASH	SU	46.5	R D W C	A 10.15Am
			0.0	INTERNATIONAL BOUND'RY		46.5		
9.31	26	3	0.1	0.1 HUNTINGDON		46.4	W	s 10.14
386 s 9.45	40	21	3.6	3.5 ABBOTSFORD	FS	42.9	R D W	385 s 10.00 9.20
s 10.00		7	8.1	4.5 SAREL		38.4		s 9.05
s 10.20	62	21	12.7	4.6 ALDERGROVE		33.8	D	s 8.50
s 11.00	26		16.9	4.2 OTTER		29.6		s 8.25
s 11.25	64	18	21.6	4.7 LINCOLN		24.9	W	s 7.55
s 12.15Pm	64	38	29.4	7.8 CLOVERDALE	CL	17.1	D XY	s 7.25
f 12.40		5	33.4	4.0 ALLUVIA		13.1		s 7.10
f 12.50		5	34.9	1.5 SOUTHPORT		11.6		f 7.05
f 12.55			35.9	1.0 COLEBROOK JCT		10.6	Y	f 7.01
1.00 s 3.56	65	59	35.9	0.0 COLEBROOK	G	10.6	R DN W	7.00 s 6.30
f 3.58			36.7	0.8 GUICHON LINE JCT		9.8		f 6.25
f 4.25		9	42.7	6.0 INVERHOLM		3.8		f 6.00
f 4.45		6	45.1	2.4 LADNER		1.4		f 5.50
A s 5.00Pm		10	46.5	1.4 GUICHON		0.0	R Y	L 5.45Am
Daily Ex. Sunday								Daily Ex. Sunday
385								386
1.30 10.2				Time Over District Average Speed Per Hour				4.30 10.2

Special Rules.

Eastward trains are superior to westward trains of the same class.

Bulletin boards are located at Sumas and Colebrook.

Maximum rate of speed for all trains between Guichon and Cloverdale, 15 miles per hour, Cloverdale and Abbotsford 20 miles per hour, Abbotsford and Sumas 15 miles per hour.

All trains will reduce speed to 25 miles per hour on curves of 8 degrees and over.

All trains will reduce speed to 10 miles per hour over draw bridges.

The normal position of switches at Colebrook Junction, Guichon Line Junction are for main line.

All trains Fifth District will protect against all Third District trains between Colebrook Jct. and Guichon Line Jct.

Eastward trains approaching Yale road crossing, which is first crossing east of Lincoln, will reduce to speed of 10 miles per hour.

INTERLOCKING governing B. C. E. Ry. crossing, Cloverdale, B. C. Distant signal on north side is located 2,500 feet from crossing. Home signal is located 75 feet from crossing. Home signal on south side is located 15 feet from crossing and distant signal 1,500 feet from crossing. Derails are placed five feet inside each home signal.

INITIAL STATIONS.
Guichon, for train No. 386.
Sumas, for train No. 385.

TERMINAL STATIONS.
Guichon, for train No. 385.
Sumas, for train No. 386.

YARD LIMITS.

Cloverdale yard limits extend to yard limit board at point about 2 miles north of Cloverdale on old line and to yard limit board at point about 1 mile south of Cloverdale on old line.

WESTWARD. SIXTH DISTRICT—ABBOTSFORD TO KILGARD. EASTWARD. 11

SECOND CLASS 387 Mixed Tuesday and Friday	Capacity of Side Tracks: Passing Tracks	Capacity of Side Tracks: Other Tracks	Distance from Cannor	Time Table No. 1 Effective May 30, 1920 — STATIONS	Telegraph Calls	Distance from Abbotsford	SIGNS. See Rule 2. Page 18.	SECOND CLASS 388 Mixed Tuesday and Friday
			0.0	CANNOR	CR	14.7		
388 L 9.40Am	40	5	9.7	9.7 KILGARD		5.0		387 As 9.40 AM
As 10.00Am	37	31	14.7	5.0 ABBOTSFORD	FS	0.0	R D W	L 9.20 AM
Tuesday and Friday								Tuesday and Friday
387								388
.20 15.2				Time Over District Average Speed Per Hour				20 15.2

Special Rules.

Eastward trains are superior to westward trains of the same class.

Maximum rate of speed for passenger trains between Abbotsford and Kilgard, 20 miles per hour, freight trains 15 miles per hour.

All trains reduce speed to 15 miles per hour over draw bridges.

Normal position switch Abbotsford Junction is for fifth district.

All trains sixth district will protect against all trains fifth district between Abbotsford and Junction one half mile east of Abbotsford.

INITIAL STATIONS.
Kilgard, for train No. 387.
Abbotsford, for train No. 388.

TERMINAL STATIONS.
for train No. 388.
Abbotsford, for train No. 387.

Business tracks not shown as stations on time table.

NAME	LOCATION	OPENS	CAR CAPACITY
Kilgard Brick Spur	at Kilgard	West	12

Business tracks not shown as stations on time table.

NAME	LOCATION	OPENS	CAR CAPACITY
Gowdy Road Spur	1.5 Miles east of Ladner	West	5
Patterson's Spur	0.9 Miles east of Inverholm	West	7
Smith Road Spur	2.0 Miles east of Inverholm	Both	7
Matthew Road Spur	3.0 Miles east of Inverholm	Both	7
Embree Road Spur	2.8 Miles west of Colebrook	Both	7
Oliver Road Spur	1.7 Miles west of Colebrook	West	4
Gravel Pit Spur	0.7 Miles east of Alluvia	West	16
Surrey Spur	1.1 Miles west of Cloverdale	West	3
McNair Spur	2.0 Miles north of Cloverdale	South	2
David Bell Co. Spur	1.5 Miles north of Cloverdale	South	9
Fernridge Lbr. Co. Spur	1.4 Miles west of Lincoln	West	15
McNair Spur No. 2	1.0 Miles west of Lincoln	East	2
Lincoln Lbr. Co. Spur	0.0 Miles east of Lincoln	West	30
Clark's Spur	1.0 Miles west of Otter	West	2
Ratie Spur	1.0 Miles east of Otter	West	7
Otter Shingle Co. Spur	at Otter	East	13
Aldergrove Lbr. Co. Spur	at Aldergrove	East	20
Singer Mill No. 2	1.0 Miles east of Aldergrove	West	3
Fish Trap Pit	1.5 Miles west of Pinegrove	West	40
Abbotsford Timber Spur	0.8 Miles west of Abbotsford	East	4

Maximum Clearance Table to be observed in the loading of material on open cars.

For Points Between	LIMIT OF LOAD—MEASUREMENT WIDTH OF LOAD AT HEIGHT ABOVE TOP OF RAIL WIDTH 1'0"	2'0"	3'0"	4'0"	5'0"	6'0"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'2"	10'6"	11'0"	11'6"	Maximum Hgt.	Maximum Wdth.
								HEIGHT											
*Lines East of Cut Bank except Pacific Junction to Butte...	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	17'0"	16'0"	18'0"	11'6"
Cut Bank to Spokane.....	17'0"	17'0"	17'0"	17'0"	16'8"	16'4"	16'0"	15'9"	15'6"	15'3"	15'0"	14'8"	14'4"	14'3"	14'0"	13'0"	12'0"	17'0"	11'6"
Spokane to Seattle.....	17'0"	17'0"	17'0"	17'0"	16'8"	16'3"	15'9"	15'6"	15'3"	15'0"	14'9"	14'6"	14'0"	13'10"	13'6"	13'0"	12'0"	17'0"	11'6"
Seattle to Vancouver, B. C.....	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	17'9"	17'6"	17'3"	17'0"	16'10"	16'6"	16'0"	15'3"	18'0"	11'6"
Seattle to Portland.....	19'0"	19'0"	19'0"	19'0"	19'0"	18'7"	18'1"	17'10"	17'4"	17'1"	16'9"	16'4"	15'11"	15'10"	15'5"	15'0"	14'6"	19'0"	11'6"
Pacific Jct. to Great Falls.....	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	17'9"	17'6"	17'3"	17'0"	16'9"	16'6"	16'5"	16'3"	16'0"	15'6"	18'0"	11'6"
Great Falls to He'ena.....	16'0"	16'0"	16'0"	16'0"	16'0"	15'8"	15'4"	15'2"	15'0"	14'8"	14'4"	14'0"	13'0"	12'8"	12'0"	11'0"	10'0"	16'0"	11'6"
Helena to Butte.....	17'0"	17'0"	17'0"	17'0"	17'0"	16'8"	16'4"	16'2"	16'0"	15'9"	15'6"	15'3"	15'0"	14'11"	14'9"	14'6"	13'6"	17'0"	11'6"
Spokane to Vancouver, B. C. via Marcus and Brookmere.	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	18'0"	17'9"	17'6"	17'3"	17'0"	16'6"	16'4"	16'0"	15'0"	14'0"	18'0"	11'6"
Spokane to Port'and via S. P. & S. Ry.....	21'0"	21'0"	21'0"	20'9"	20'6"	20'2"	19'9"	19'7"	19'4"	19'2"	19'0"	18'8"	18'3"	18'2"	18'0"	17'9"	.....	21'0"	11'0"

*Except Minneapolis Junction to Clearwater Junction and University Switch to Union Depot Junction via Stone Arch, which limit heights to 16'6" and 17'3" respectively.

BILLING INSTRUCTIONS.

As per Rules 114 and 198 of Instructions to Agents, waybills should not be issued for the movement of cabooses, bad order cars on their own wheels or empty freight cars, either system or foreign. Empty car slip, Form 300, should be used for this purpose.

When moved in revenue freight trains, the following described equipment should be waybilled on D. H. Co. waybill, Form 16, at the weights shown below:

	Pounds
Salvage of bad order car	30,000
Dead engines	Actual weight
Steam shovels, 60 ton	120,000
" " 65 ton	130,000
" " 70 ton	142,000
" " 95 ton	184,000
Pile Drivers	112,000
Derrick Cars, 35 ton	121,400
" " 50 ton	160,400
" " 60 ton	163,500
" " 75 ton	148,000
" " 100 ton	174,500
" " 150 ton	246,500
Rotary plows (95007 and 95008)	200,000
Rotary plows (others)	127,000

	Pounds
Dozers	40,000
B. & B. outfit cars	28,000
First class coach (wood)	86,000
Second class coach (wood)	57,400
Coaches (steel)	120,700
Tourist sleepers	84,900
Sleepers	111,800
Diner	106,400
Parlor	108,700
Baggage	65,000
Mail	114,700
Baggage and express	96,900
Express refrigerator	76,500
Pass. and baggage	50,800
Mail and baggage	57,000
Mail, baggage and express	109,000

NOTE—The weights shown for steam shovels are net. If shipment includes a boom, 20,000 pounds should be added. If dipper and dipper sticks are included, 10,000 pounds should be added.

These instructions do not apply when equipment is moved in work trains.

CAPACITY OF ENGINES IN ADDITION TO WEIGHT OF ENGINES, TENDERS AND CABOOSES.

STATIONS	Ruling Grade	Class L1S-1902-1903-1908-1921				Class L1-1900-1921				Class L2-1800-1844 " "O1" 3020-3069 " P-1750-1764				Class F8-1140-1199 Superheated				Class F5-1095-1099 " F5-1100-1109				Class G2-700-719 " G3-720-769				Class F1-500-565 " D5-450-476				Class D-300-395			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Gold Bar to Skykomish	1.0	1700	1530	1360	1275	1600	1440	1280	1200	1550	1400	1250	1170	1350	1220	1090	1025	1200	1080	960	900	1000	900	800	750	775	700	625	600	....	....	....	....	....	....	....	....
Skykomish to Cascade Tunnel	2.2	900	810	720	675	850	765	680	640	700	630	560	530	625	565	500	470	600	540	480	450	480	435	385	360	360	325	290	250	....	....	....	....	....	....	....	....
Cascade Tunnel to Leavenworth	Down	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	1250	1250	1250	1250	900	900	900	900	....	....	....	....	....	....	....	....
Leavenworth to Cascade Tunnel	2.2	900	810	720	675	850	765	680	640	700	630	560	530	625	565	500	470	600	540	480	450	480	435	385	360	360	325	290	250	....	....	....	....	....	....	....	....
Seattle to Delta	0.5	....	....	....	....	....	....	....	....	3500	3150	2800	2630	2850	2570	2290	2100	2500	2250	2000	1875	2000	1800	1600	1500	1500	1350	1200	1125	....	....	....	....	....	....	....	....
Delta to Seattle	0.4	....	....	....	....	....	....	....	....	4000	3600	3200	3000	3000	2700	2400	2250	2750	2480	2210	2080	2300	2070	1840	1730	1800	1620	1440	1360	....	....	....	....	....	....	....	....
Cascade Tunnel to Skykomish	Down	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	1250	1250	1250	1250	900	900	900	900	....	....	....	....	....	....	....	....
Bellingham to Delta	0.5	....	....	....	....	....	....	....	....	....	....	....	....	2600	2340	2080	1850	2300	2070	1840	1730	1650	1500	1350	1270	1300	1170	1040	975	....	....	....	....	....	....	....	....
Delta to Bellingham	0.4	....	....	....	....	....	....	....	....	....	....	....	....	2800	2520	2240	2100	2500	2250	2000	1875	1800	1620	1440	1360	1460	1320	1200	1130	....	....	....	....	....	....	....	....
Delta to Gold Bar	0.4	3800	3150	2800	2630	3800	3150	2800	2630	3500	3150	2800	2630	2800	2520	2240	2100	2500	2250	2000	1875	1800	1620	1440	1360	1460	1320	1200	1130	....	....	....	....	....	....	....	....
Skykomish to Delta	0.3	4000	3600	3200	3000	4000	3600	3200	3000	3800	3150	2800	2630	3200	2880	2560	2400	3000	2700	2400	2250	2200	1980	1760	1650	1600	1440	1280	1200	....	....	....	....	....	....	....	....
Bellingham to Vancouver	1.1	....	....	....	....	....	....	....	....	....	....	....	....	1500	1350	1200	1125	1300	1170	1040	975	1000	900	800	750	775	700	625	600	....	....	....	....	....	....	....	....
Vancouver to Bellingham	1.1	....	....	....	....	....	....	....	....	....	....	....	....	1500	1350	1200	1125	1300	1170	1040	975	1000	900	800	750	775	700	625	600	....	....	....	....	....	....	....	....
Anacortes to Rockport	0.8	....	....	....	....	....	....	....	....	....	....	....	....	1625	1500	1350	1275	1425	1285	1140	1000	1100	990	890	800	960	865	770	670	850	765	680	595	....	....	....	....
Rockport to Anacortes	1.0	....	....	....	....	....	....	....	....	....	....	....	....	1550	1400	1275	1200	1350	1250	1100	980	1020	950	850	725	800	725	650	620	650	600	550	500	....	....	....	....
.....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
.....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

WEATHER RATING {1—When temperature is 25 degrees above zero or over. 2—Very frosty or wet. 5 to 25 above zero.

WEATHER RATING {3—Five degrees above to 10 below zero. 4—Ten below zero and colder.

Chief Train Dispatcher may increase or decrease above rating as it may be found necessary.

Weights of Empty Freight Cars.

Box Cars, 28 to 30 foot	11 Tons
Box Cars, 33 foot	12 Tons
Box Cars, 34 foot	13 Tons
Box Cars, 36 foot	15 Tons
Box Cars, 40 foot	17 Tons
Refrigerator Cars	20 Tons
Express Refrigerator Cars	33 Tons
Furniture Cars, 30 to 40 foot	17 Tons
Furniture Cars, 40 to 50 foot	19 Tons
Cabooses, 8 wheel	17 Tons
Cabooses, 4 wheel	10 Tons
Flat Cars, 28 to 30 foot	9 Tons
Flat Cars, 33 and 34 foot	11 Tons
Flat Cars, 40 foot	12 Tons
Coal Cars	12 Tons
Gondola Cars	13 Tons
Ore Cars, Wood	12 Tons
Ore Cars, Steel	15 Tons
Oil Tanks	15 Tons
Ballast Cars	12 Tons
Steam Wreckers	75 Tons

The following will govern when handling empty cars: With 10 or less empty cars in a train no allowance will be made for wheel friction; with 10 to 20 empty cars in a train, add to actual weight 5 tons for each empty car for wheel friction; with more than 20 empty cars in a train add 6 tons per car for wheel friction.

Weights of Passenger Equipment.

	Wooden	Steel Underframe	Steel
Postal Cars,			
Nos. 1 to 21	....	....	67 Tons
Nos. 90 and 91	....	....	48 Tons
Nos. 50 to 69	54 Tons	....	....
Nos. 107 to 114	43 Tons	....	....
Baggage and Mail,			
Series 300 and 400	26 Tons	....	....
Series 500 and 600	45 Tons	....	....
Series 700	60 Tons	....	....
Series 800	....	60 Tons	....
Baggage and Express,			
Nos. 1000 to 1027	25 Tons	....	....
Nos. 1050 to 1089	50 Tons	....	....
Nos. 1100 to 1119	....	60 Tons	....
Nos. 1588 to 1702	55 Tons	...	....
Express Refrigerators,			
Nos. 1900 to 2097	Have weights stenciled on cars.		
Passenger and Baggage,			
Nos. 2100 to 2201	25 Tons	....	....
Coaches,			
Nos 3000 to 3241	27 Tons	....	....
Nos 3250 to 3606	48 Tons	....	....
Nos. 3700 to 3724	....	52 Tons	....

Weights of Passenger Equipment—Cont.

	Wooden	Steel Underframe	Steel
Coaches—Cont.			
Nos. 4000 to 4012	36 Tons	....	....
Nos 4013 to 4060	41 Tons	....	....
Nos. 4100 to 4159	51 Tons	....	....
Nos. 4200 to 4317	59 Tons	....	....
Nos. 4500 to 4529	....	....	70 Tons
Tourist,			
Nos. 6520 to 6567	43 Tons	....	....
Nos 6568 to 6611	52 Tons	....	....
Diners,			
Nos. 7010 to 7015	50 Tons	....	....
Nos. 7030 to 7041	58 Tons	....	....
Nos. 7100 to 7131	61 Tons	....	....
Parlor Cars,			
Nos. 7500 to 7571	45 Tons	....	....
Nos. 7572 to 7604	60 Tons	....	....
Sleepers,			
Nos 8000 to 8456	60 Tons	....	....
Compartment-Observation,			
Nos. 9001 to 9035	63 Tons	....	....
Business Cars,			
Average Weight	40 Tons	....	....

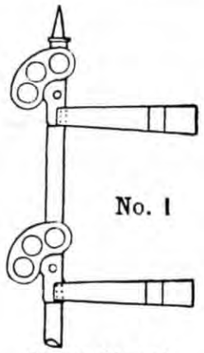
Weights of Dead Engines and Tanks.

Engines numbered below 200 series	80 Tons
Engines numbered in 200 series	90 Tons
Engines numbered in 300 series	86 Tons
Engines numbered in 400 series	110 Tons
Engines numbered in 500 series	115 Tons
Engines numbered in 600 series	120 Tons
Engines numbered in 700 series	140 Tons
Engines numbered in 800 series	155 Tons
Engines numbered in 900 series (except 992 to 997)	115 Tons
Engines numbered 992 to 997	95 Tons
Engines numbered 1000 to 1007	131 Tons
Engines numbered 1050 to 1069	144 Tons
Engines numbered 1079 to 1095	158 Tons
Engines numbered in 1100 and 1200 series	160 Tons
Engines numbered in 1300 series	160 Tons
Engines numbered 1400 to 1405	173 Tons
Engines numbered 1406 to 1425	188 Tons
Engines numbered in 1500 and 1600 series	179 Tons
Engines numbered in 1700 series	180 Tons
Engines numbered in 1800 series	219 Tons
Engines numbered in 1900 series	252 Tons
Engines numbered in 3000 series	217 Tons
Engines numbered 1750 to 1764	246 Tons
Engine Tank (Empty)	30 Tons

Speed Table.

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

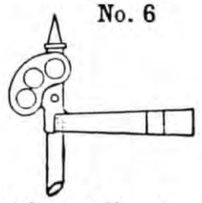
ELECTRIC TRAIN STAFF BLOCK SIGNAL DIAGRAMS.



Home Signal.

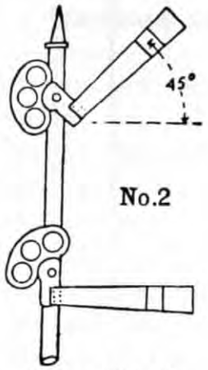
Color. Upper Arm RED light at night.
Lower Arm RED light at night.
Indication. STOP. Proceed only when Signal clears.
Name. STOP Signal.

No. 6



Distant Signal.

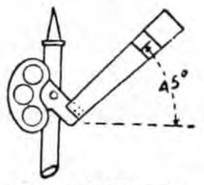
Color. RED light at night.
Indication. STOP then proceed with caution to Home Signal.
Name. STOP Signal.



Home Signal.

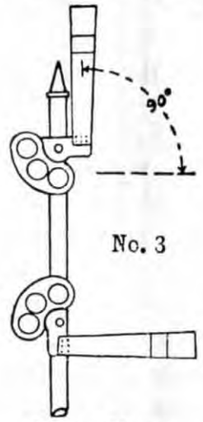
Color. Upper Arm, YELLOW light at night.
Lower Arm, RED light at night.
Indication. Proceed on main line with caution, be prepared to stop at the Block Station.
Name. CAUTION Signal.

No. 7



Distant Signal.

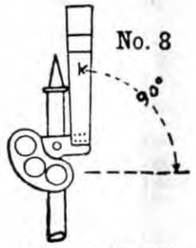
Color. YELLOW light at Night.
Indication. Proceed with CAUTION prepared to stop at Home Signal.
Name. CAUTION Signal.



Home Signal.

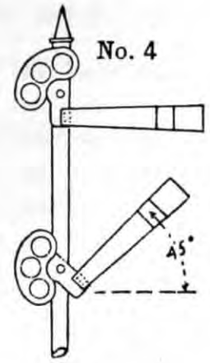
Color. Upper Arm GREEN light at night.
Lower Arm, RED light at night.
Indication. Main line route clear staff in crane PROCEED.
Name. CLEAR Signal.

No. 8



Distant Signal.

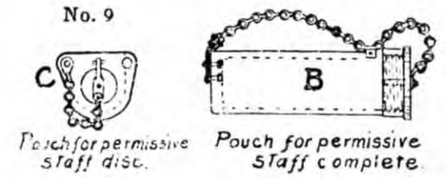
Color. GREEN light at night.
Indication. PROCEED. Staff in Crane.
Name. CLEAR Signal.

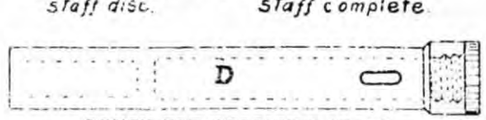


Home Signal.

Color. Upper Arm, RED light at night.
Lower Arm, YELLOW light at night.
Indication. Take Passing track.
Name. CAUTION Signal.

No. 9

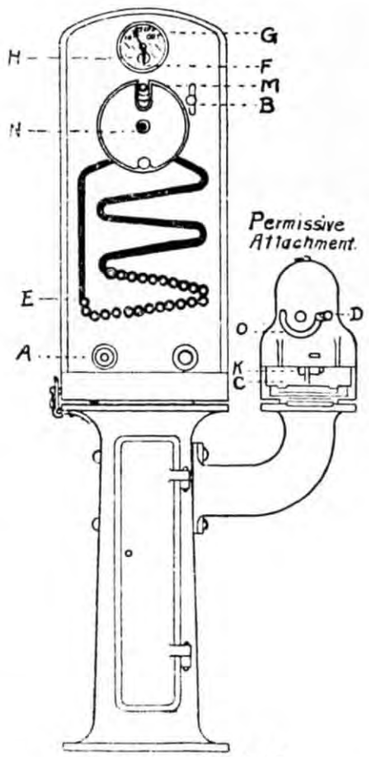




POUCH FOR ABSOLUTE STAFF.

Code of Signals

1 —	To attract attention.
2 - -	All Right. Yes.
3 - - -	Block wanted, Unlock my Instrument, Ans. by Unlocking or by 5 or 3-1.
4 - - - -	Train has entered Block.
5 - - - -	Block is not clear.
6 - - - -	Has a train entered this Block? Answer by 2 or 2-1.
1-2— - -	Clear. Train has cleared Block.
2-1 - - -	No.
2-2-2 - -	Previous Signal given in error. Answer by 2.
2-4 - -	Has train Cleared Block? Answer by 5 or 3-1.
3-1 - - -	Have unlocked. Block is clear. It must not be used unless Block is known to be clear.
3-3 - - -	Train in Block.
5-5-5 - -	- - - - - - - - Obstruction in Block. Stop all trains approaching this Station. Answer by repeating.
8 - - - -	Testing. Answer by repeating.



STAFF INSTRUMENT.

GENERAL INSTRUCTIONS

FOR

OPERATING TRAIN STAFF INSTRUMENTS.

TO REMOVE STAFF FROM MACHINE.

Instructions to Operator removing staff.

1st. Press bell key "A" once ⊙. Answer will be two ⊙ taps.
2nd. Press bell key "A" three ⊙ times. Then watch current indicating needle "F" until it deflects to the right.
3rd. Turn preliminary spindle "B" to the right as far as it will go and then release it, permitting it automatically to return to its former position.
A white disc will appear in place of the red one at "H". This indicates that staff is ready to be removed.
4th. Move end staff "E" up to vertical slot into engagement with guard "N". This guard having been turned so that the staff will slip into the slot in the edge of the guard "N."
5th. Revolve guard "N" using staff as a handle and withdraw the staff through the opening at "M". This operation moves staff, indicating needle "G" from "Staff in" to "Staff out."
6th. Immediately upon withdrawal of staff, press bell key "A" once. This is absolutely necessary.

Instructions to Operator aiding in removal of a staff.

1st. Upon receipt of one ring acknowledge same by two pushes on bell key "A."
2nd. Upon receipt of three rings, press bell key and hold it so until staff indicating needle "F" moves from left to right Twice then release key "A" as operation is complete.

TO REPLACE STAFF IN THE MACHINE.

Instructions to Operator replacing staff.

1st. Turn outer guard "N" to place and insert staff in the opening "M."
2nd. Using staff as handle revolve guard "N" to the right and allow staff to roll down spiral into place.
3rd. Press bell key "A" according to signal 1-2 of the bell code.

Instructions to Operator at opposite end of Block.

The signal 1-2 of the bell code must in every case be answered in order to place the machines in proper condition for the withdrawal of the next staff.

TO REMOVE THE PERMISSIVE STAFF FROM MACHINE.

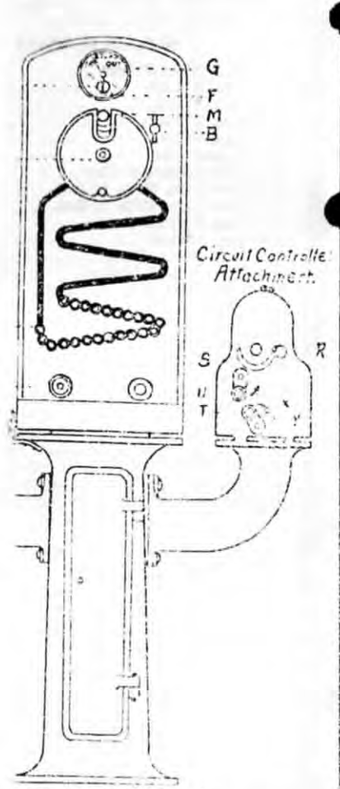
1st. Insert solid staff in the opening "D" of the permissive attachment and move to the extreme left of the slot "O."
2nd. Turn the latch "K" and allow door "C" to drop and the permissive staff to roll out.

TO REPLACE THE PERMISSIVE STAFF IN THE MACHINE.

1st. Be sure all discs are on the permissive staff in their proper numerical order.
2nd. Place staff in attachment, close door "C" and latch with "K."
3rd. Move solid staff to the right thru slot "O" and remove at opening "D."

INSTRUCTIONS FOR OPERATING SEMAPHORE SIGNALS THROUGH CIRCUIT CONTROLLER ATTACHMENT.

1st. To operate Upper Arm of Semaphore 0° to 45° (See Fig. No. 2), turn handle "T" to the right clockwise to stop "X."
2nd. "To operate Upper Arm of Semaphore 45° to 90° (See Fig. No. 3), withdraw absolute staff and insert into opening "R" and move to extreme left of slot "S" then turn handle "T" to right to stop "Y," remove absolute staff from opening "R" and place staff in Pouch "D", Fig. 9. Then place Pouch in staff crane which action automatically "Clears" Home and Distant Signals to 90° Position. (See Fig. Nos. 3 and 8).
3rd. To operate Lower Arm of Semaphore 0° to 45° (See Fig. No. 4), turn handle "U" to the right as far as it will go.



STAFF INSTRUMENT.

Electric Train Staff Block Signal System in operation between Leavenworth and Skykomich, Everett Jct., and Pacific Ave., and between Delta Wye and Marysville.

The use of the divided staff through Cascade Tunnel and all rules and instructions pertaining thereto will continue in effect.

All rules relating to the protection of trains are in force and are only modified by the General Instructions herein.

1. All trains and engines in both direction will be governed exclusively in their movements by the train staff.

2. Home and Distant semaphores are located at each block station. Home signals are located at the passing track switches. Distant Signals are located about 4,000 feet from home signals. The signal indications are illustrated by figures Nos. 1, 2, 3, 4, 6, 7, 8 and the meaning of the positions of the signal arms and lights is explained under the diagrams. In all cases the block signals are located upon the right of and adjoining the track upon which trains are governed by them. The semaphore arms that govern are displayed to the right of the signal mast as seen from an approaching train.

3. The possession of the staff by the Engineer gives his train the right of track to the next block station.

Engineers must know that the staff is in the pouch before proceeding.

4. The staff will be handled by the Engineer of the leading engine of the train; and the staff must be in the actual possession of the Engineer before he moves his train into a block, and such engine must not be uncoupled from the train except at a block station. The Conductor will receive a "proceed" signal from Block Operator to indicate that staff has been delivered to Engineer. (Seee Rule 21-E.)

4-A. In the case of an engine pushing a train, it must be considered as part of that train through to the next block station, and may be uncoupled only at a block station. Such engine, if then uncoupled, must be treated as a separate train.

5. When a staff has been secured by the Engineer, he will announce the fact by sounding one short, one long and one short blast of the whistle, thus (o—o.)

6. An absolute staff permits but one train at a time to use a block. See D figure No. 9.

6-A. A permissive staff disc permits two or more train in the same direction at one time to use a block on ascending grade only, except westward between Leavenworth and Drury, Winton and Merritt, and eastward between Scenic and Tye. Each train must be in possession of a permissive staff disc before proceeding. See C. Fig. No. 9.

6-B. Permissive staff discs must not be given to Engineers with light engines or light tonnage trains to follow a passenger train.

6-C. Permissive staff complete permits but one train at a time to use a block descending grade only. See B, Fig. No. 9, and Rule No. 22-D.

7. The delivery of the staff to the Enginemen will be either by staff crane, hand of Block Operator, or the Conductor or head Brakeman of his own train and the Engineer must not accept delivery of a staff from any other person. Block Operators will not deliver staff to any other than one of these employes.

8. Staff will be delivered by Engineer on arrival at Block Station by dropping same at a designated spot, or, in case of taking siding, and it cannot be personally delivered by Engineer, it will immediately be sent to Block Operator by head Brakeman or Conductor.

Under no circumstances will a staff be transferred from one train to another. It is the duty of the Block Operator to see that all of the train clears the block before inserting staff into instrument.

9. In case a train parts, or it is necessary to "double," the staff must be retained by the Engineer until all the train is clear of the block. A train is clear of a block when it has passed the home signal. A train proceeding on main track enters a block at the block office. It may occupy the main track inside of home signals in either direction to do station work or to allow another train to enter the sidetrack, but must not proceed until in possession of a staff, as per Rule No. 3.

9-A. A train making switching movements may use the main track to, but not beyond the distant signal, when protected as per Rule 99. Superior class trains must not be delayed.

10. Enginemen and Trainmen will carefully note the position of all signals and be governed accordingly in the moveemnt and protection of their trains. See Figs. Nos. 1, 2, 3, 4, 6, 7, 8.

11. Conductors and Engineers, before leaving initial points, must secure clearance card. Form 219.

12. Block Operators, unless otherwise instructed by Train Dispatcher, will staff the train of superior time table rights and side track the inferior train when a meeting point develops at their station.

13. When it is desired to reverse the right of track, trains will be moved by train Dispatcher's orders on Form 19, issued to Block Operators giving instructions to staff the train that is to receive preferred attention, and side track the superior train.

14. Work trains, after receiving orders authorizing the existence of the train, will occupy the block after receiving the absolute staff until same is surrendered at a block station at either end of the block. They will be given a time by the Train Dispatcher when delivery shall be made, and unless otherwise instructed, they shall clear the block and deliver the staff to the Block Operator so that regular and extra trains will not be delayed. Train Dispatcher may authorize the delivery of a permissive disc in the prescribed direction to enable work train to work under protection of flag until following train approaches.

15. In case of failure of staff apparatus, all concerned must be notified and trains will be moved by train orders until it has been repaired. In such event, the train order takes the place of the staff, through only one block on each train order and this order must be given jointly to the Conductor and Engineer of the train and the Block Operator at both ends of the block.

15-A. In the event of staff apparatus and other means of communication becoming out of order due to the breakage of line wires or other causes, trains will move in accordance with general rules and time table rights, obtaining at each block office, block card, Form No. 2615, signed by Block Operator.

15-B. When a staff apparatus has been repaired it will not be put into use until authorized by Train Dispatcher.

15-C. Before issuing train orders, superseding staff system, the Train Dispatcher must know that block is clear and the Block Operator and Train Dispatcher must know that the full number of staffs are in the two instruments of this block.

16. In case a staff should be lost, the staff instruments in this block are inoperative and trains must be moved only by the authority of Train Dispatcher, who will then issue train orders. The staff can only be replaced by Signal Repairman who has charge of the staffs not in use. No extra staffs will be allowed in the possession of any other employe.

17. Should a train pass a block station without markers, the Block Operator must notify the Train Dispatcher and the next block station in each direction and must not report that train clear of the block until he has ascertained that the train is complete.

18. A record of all trains must be kept at each block station on Form No. 290.

19. In case of unexpected delay to a train to which a staff has been delivered, same can be recalled by Block Operator and return of staff to the instrument will cancel the authority given to such train to proceed. The train then has no right to main track until given another staff.

20. Block Operators must not deliver a staff received from one train to another train. It must be placed in the instrument and another withdrawn in accordance with the rules.

21. **Block Operators will handle the staff machines in accordance with the rules and general instructions for operating staff instruments.**

21-A. When two or more trains bound in opposite directions are at a block station, Block Operator must exercise great care in delivery of staffs and must know that the staff is delivered to the train for which it was withdrawn.

21-B. Enginemen and Trainmen may accept an absolute staff (See Rule 3) as authority for a train movement only when placed in a pouch bearing a metal plate upon which is printed the names of the two stations between which the train is to be moved.

21-C. Enginemen and Trainmen may accept a permissive staff disc (See Rule 6-A) as authority for a train movement only when such disc has printed upon it the names of the two stations between which the train is to be moved.

21-D. Enginemen and Trainmen may accept a permissive staff (See Rule 6-C) as authority for a train movement only when such permissive staff has printed upon it the names of the two stations between which the train is to be moved. Block Operator will deliver permissive staff with printed end up in pouch "B" open. Engineer after observing that proper staff has been received will close pouch.

21-E. Block Operator will remain in view until rear end of the train has passed and will then give a "Proceed Signal" to the Trainman thereon, to indicate that the staff has been delivered to the Engineman.

22. Absolute staffs (See D, Fig. No. 9) must be used for all trains on descending grades, or eastward from Cascade Tunnel to Leavenworth, and westward from Tye to Skykomish.

22-A. Trains moving under authority of a permissive staff disc must protect against following trains as per Rule No. 99. Trainmen will not be required to protect rear of train in staff territory between Skykomish and Leavenworth, when positively known engineer holds a positive staff. When a train stops between stations, engineer if holding permissive staff, will immediately whistle out flag. If holding positive staff, will not whistle out flag, but a trainman must be on rear of train.

22-B. When two or more trains use permissive staff discs the last train will be given the permissive staff (See B, Fig. No. 9) with all the remaining discs and this confers the same rights as a single permissive staff disc.

22-C. The Block Operator receiving the permissive staff must at once assemble on it in numerical order all the permissive discs received from preceding trains and place the complete permissive staff in the permissive attachment.

22-D. The first train in the opposite direction (descending the grade) must be given the complete permissive staff, which confers the same rights as an absolute staff.

23. When no train movement is imminent, home signals must be kept in stop position.

24. Block Operators must not make nor permit any unauthorized alterations or additions to the apparatus. If alterations or additions are made, the work will be done under the direction of the Signal Supervisor.

25. If any electrical or mechanical appliance fails to work properly, the Signal Repairman and Train Dispatcher must be notified and only duly authorized persons permitted to make repairs.

26. Block Operators must have the proper appliances for hand signaling (a yellow flag by day and a yellow light by night) ready for immediate use. Hand signals must not be used when the proper indications can be displayed by the fixed signals. When hand signals are necessary, they must be given from such a point and in such a way that there can be no misunderstanding on the part of Enginemen or Trainmen as to the signals or as to the train for which they are given.

27. Block Operators are responsible for the care of the block station, lamps and supplies and of the signal apparatus unless provided for otherwise.

28. Lights in block stations must be so placed that they cannot be seen from approaching trains.

29. Block Operators must not use, nor will Enginemen or Trainmen accept pouches, which are defective. Care must be exercised to keep the pouch plugs in good order with clamps, bearing station, names, securely in place. Signal Repairmen must also frequently inspect all pouches and keep same in good order at all times.

30. The Engineer of a train which has parted must sound the whistle signal for "train parted" on approaching a block station.

31. An Engineer receiving a "train parted" signal must answer by two short blasts of the whistle.

32. When a parted train has been recoupled the Block Operator must be notified.

33. If the track is obstructed between block stations notice must be given to the nearest Block Operator.

34. If a train is held by a block signal to exceed two minutes, the Conductor must ascertain the cause.

34-A. The Conductor must report to the Superintendent any unusual detention at block stations.

35. Special attention of all concerned is directed to meaning of caution signal as shown by Fig. No. 2.

36. Staff instruments must be kept locked. Keys will be furnished to the signal repairman but to no other person.

AUTOMATIC BLOCK SIGNALS.

501. In all cases except as noted by special rules, the BLOCK Signals are located upon the Right of and adjoining the track upon which trains are governed by them. The Semaphore arms that govern are displayed to the right of the Signal mast as seen from an approaching train. The movement of trains will be regulated by the block Signal indications as follows:

A. An arm in the horizontal position (See figure No. 1) indicates that the block is not clear and is a Signal to **"STOP"**.

B. An arm in an inclined position (45 degrees above the horizontal) (See figure No. 2) indicates **"PROCEED"** with caution prepared to stop at the next signal.

C. An arm in the vertical position (90 degrees above the horizontal) (See figure No. 3) indicates that the block is **"CLEAR"** and is a Signal to **"PROCEED."**

D. At night the position of the Signals will, in addition, be shown by the standard colored lights.

RED indicates **"STOP"**.

YELLOW indicates **"CAUTION;"** proceed with caution prepared to STOP at next Signal.

GREEN indicates **"PROCEED."**

502. Block Signals control the use of the blocks, but unless otherwise provided, do not supersede the superiority of trains; nor dispense with the use or the observance of other Signals whenever and wherever they may be required.

503. Block Signals for a track apply only to trains running with the current of traffic on that track.

A. Automatic Signals are designated by the number plate located on the mast below the arm. Intermediate automatic block signals located between passing tracks are equipped with one arm and one light. Home automatic block signals located at each passing track are in addition equipped with a Disc enclosing a red light six feet below the Semaphore arm. The Disc and red light are provided as a distinguishing marker for the home signals only. Trains passing Home Signals, automatically set to the "Stop Position" all Signals governing train movements in the opposite direction from the next passing track. See figures 4, 5 and 6.

B. Trains holding main track at meeting points must stand clear of passing track lead. Trains proceeding from side tracks, spurs, or other tracks to a main track, must remain clear of the bonded rails and insulated joints on such tracks, until the main line switch has been opened.

504. When a train is stopped by a block signal it may proceed when the signal is cleared. If not immediately cleared it may proceed —(See A, B and C):

A. On single track, if the block signal is a Home Automatic Signal, at a speed not to exceed 6 miles per hour after obtaining authority from the Train Dispatcher, or preceded by a flagman to the next signal displaying a "Caution" or "Clear" indication expecting to find track impassable.

B. On single track, if the block signal is an intermediate automatic signal, at once, at a speed not to exceed 6 miles per hour, except when proceeding under Rule 504-A, expecting to find track impassable.
Or—

C. On double track, at once, under control, expecting to find track impassable.

D. A train stopped by a Block Signal must stand facing the signal so that its indication may be observed from the Engine. The forward wheels must not pass the signal.

505. Omitted.

506. When a train is stopped by a block signal from any cause, Engineman will report to Superintendent, preferably on Form 2600 and operator will transmit in accordance with instructions thereon.

507. Lights must be used upon all block signals from sunset to sunrise, and whenever the signal indications cannot be clearly seen without them. At such times if lights are not burning, or if a white light is shown where a colored light should be, trains must ascertain and be governed by the day signal indication before passing signal.

508. In making train movements through cross-over or other switches to or from a main track, one of the switches must be kept open until train movement is completed to insure signal protection.

The opening of any switch will set and hold signal of that block at stop until the switch is closed. The opening of any switch at either end of a double track cross-over will hold signals on both main tracks at stop.

If either end of a siding cross-over on single track is opened, it will set and hold the signals that control the block on main track to which it leads in both directions at stop. Neither switch nor cross-over must therefore be opened, until the movement of the train is to be made, and must be closed immediately after the movement has been made and the switches locked.

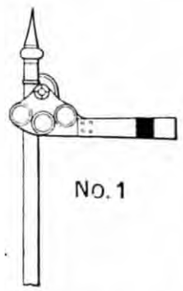
509. Switch Indicators (miniature semaphores) where used stand normally in **"STOP"** position. Trainmen or others using switches equipped with switch indicators must first push button on bottom of switch indicator case and if no train is approaching switch indicator will clear when switch may be used. The switch should be thrown at once after switch indicator clears.

510. When necessary to clean ash pan or cinders from the smoke arch inside of block signal limits care must be taken to avoid dumping live coals or hot cinders on the wooden trunking used to protect the signal track wiring.

511. Omitted.

512. Cars on side track or other tracks connecting with main tracks must be kept clear of bonded rails and insulated joints as otherwise signals will be held in **"STOP"** position. All tracks connecting with main track are bonded to clearance point only.

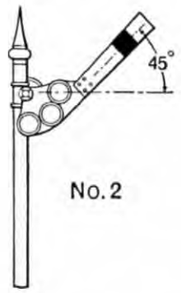
513. Interlocking Signals located in districts equipped with Automatic Signals, become, unless otherwise stated under "Special Rules," a part of the automatic block signal system. All such Home Interlocking Signals are equipped with not less than two arms and two lights, see general instructions governing operation and maintenance of interlocking plants and figures Nos. 7, 8, 9, 10, 11 and 12.



No. 1

INTERMEDIATE
AUTOMATIC BLOCK SIGNAL.

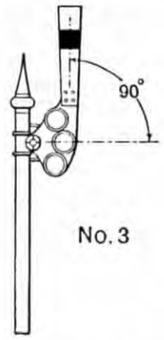
Color. RED light at night.
Indication. STOP.
Name. STOP Signal.



No. 2

INTERMEDIATE
AUTOMATIC BLOCK SIGNAL.

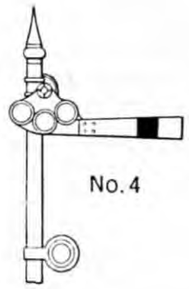
Color. YELLOW light at night.
Indication. PROCEED with CAUTION, prepared to stop at next signal.
Name. CAUTION Signal.



No. 3

INTERMEDIATE
AUTOMATIC BLOCK SIGNAL.

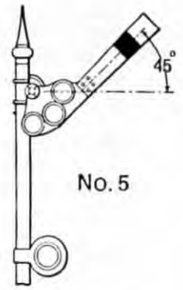
Color. GREEN light at night.
Indication. PROCEED.
Name. CLEAR Signal.



No. 4

HOME
AUTOMATIC BLOCK SIGNAL.

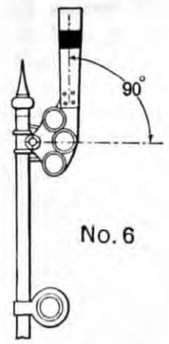
Color. Arm, RED light at night.
Disc, RED light at night.
Indication. STOP.
Name. STOP Signal.



No. 5

HOME
AUTOMATIC BLOCK SIGNAL.

Color. Arm, YELLOW light at night.
Disc, RED light at night.
Indication. PROCEED with CAUTION, prepared to stop at next signal
Name. CAUTION Signal.



No. 6

HOME
AUTOMATIC BLOCK SIGNAL.

Color. Arm, GREEN light at night.
Disc, RED light at night.
Indication. PROCEED.
Name. CLEAR Signal.

INTERLOCKING SIGNALS.

661. Trains or engine may be run to but not beyond a signal indicating "Stop," except as provided in Rule 663.

662. If a Clear or Caution signal, after being accepted, is changed to a "Stop" signal before it is reached, the stop must be made at once. Such occurrence must be reported to the Superintendent.

663. Enginemen and Trainmen must not proceed on hand signals as against interlocking signals until they are fully informed of the situation and know that they are protected, and then only when the prescribed hand signal is given as per Rules 620 and 620-A.

664. The Engineman of a train which has parted must sound the whistle signal for "train-parted" on approaching an interlocking plant.

665. An Engineman receiving a "train-parted" signal from a Signalman must answer by the whistle signal for "train-parted."

666. When a parted train has been re-coupled the Signalman must be notified.

(a) The speed of trains through the home signal zone of interlocking plants in use at railway crossings, railway junctions or draw bridges is restricted as follows:

(b) Passenger trains holding main line route shall not exceed twenty-five miles per hour.

(c) Passenger trains taking diverging route shall not exceed fifteen miles per hour.

(d) Freight trains holding main line route shall not exceed eighteen miles per hour.

(e) Freight trains taking diverging route shall not exceed ten miles per hour.

(f) All trains moving against the current of traffic on double track or wherever governed by dwarf signals shall not exceed eight miles per hour.

(g) Conditions may require a further speed restriction for all trains at draw bridges or other points as per special rules.

667. Sand must not be used over movable parts, or ashes dumped within the limits of an interlocking plant.

668. Conductors must report to Superintendent any unusual detention at interlocking plants.

669. Trains or engines stopped by the Signalman in making a movement through an interlocking plant, must not move in either direction until they have received the proper signal from him.

620. If a signal fails to work properly its operation must be discontinued and until repaired the signal secured so as to display the normal indication. Under such circumstances Signalmen must be governed as per Rule 623 and in addition will require all trains to make a full stop before giving hand signal to proceed. Signalmen giving proceed hand signals must use a yellow flag by day and a yellow light by night.

620A. Signalmen giving hand signals must do so from the center of the track upon which the train movement is to be made. When more than one train is in sight hand signal must be given from a point not to exceed one hundred feet in advance of the locomotive.

623. If there is a derailment, or if a switch is run through, or if any damage occurs to the track or interlocking plant, or if any part of the interlocking apparatus fails to operate properly, the signals must be restored to the normal position, and no train or switch movement permitted until the track and interlocking parts liable to consequent injury or failure have been thoroughly examined and and are known to be in safe condition.

Note. A flag signal given by Signalman at an interlocking home signal in automatic signal districts is only authority to pass such signal and does not modify its indication as an automatic signal. See Rules 504 and 513.

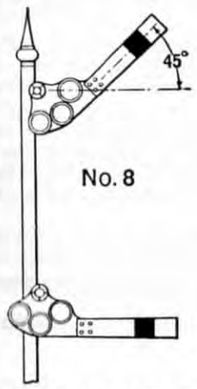
No. 7

INTERLOCKING HOME SIGNAL.

Color. Upper Arm, RED light at night.
Lower Arm, RED light at night.

Indication. STOP. Proceed only when signal clears or upon prescribed hand signal from Signalman.

Name. STOP Signal.



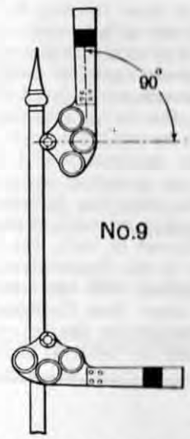
No. 8

INTERLOCKING HOME SIGNAL.

Color. Upper Arm, YELLOW light at night.
Lower Arm, RED light at night.

Indication. Main line route clear, proceed with CAUTION, prepared to stop at next signal.

Name. CAUTION Signal.



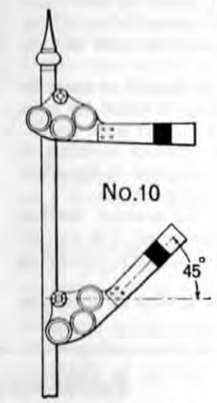
No.9

INTERLOCKING HOME SIGNAL.

Color. Upper Arm, GREEN light at night.
Lower Arm, RED light at night.

Indication. Main line route clear, PROCEED.

Name. CLEAR Signal.



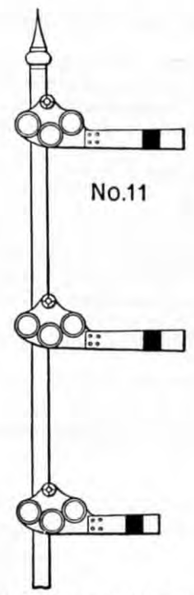
No.10

INTERLOCKING HOME SIGNAL.

Color. Upper Arm, RED light at night.
Lower Arm, YELLOW light at night.

Indication. Diverging route clear, proceed with CAUTION.

Name. CAUTION Signal.



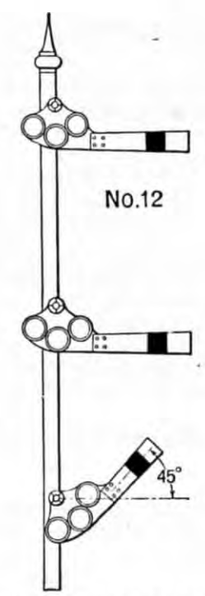
No.11

INTERLOCKING HOME SIGNAL.

Color. Upper Arm, RED light at night.
Middle Arm, RED light at night.
Lower Arm, RED light at night.

Indication. STOP. Proceed only when signal clears or upon prescribed hand signal from Signalman.

Name. STOP Signal.



No.12

INTERLOCKING HOME SIGNAL.

Color. Upper Arm, RED light at night.
Middle Arm, RED light at night.
Lower Arm, YELLOW light at night.

Indication. Slow speed route clear, proceed with caution.

Name. CAUTION Signal.

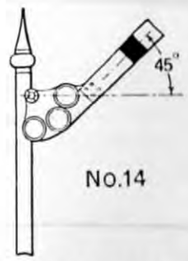
No.13

INTERLOCKING DISTANT SIGNAL.

Color. RED light at night.

Indication. STOP, then proceed with CAUTION, prepared to stop at Home Signal.

Name. STOP Signal.



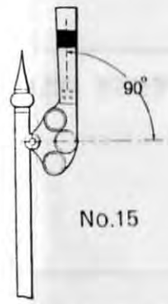
No.14

INTERLOCKING DISTANT SIGNAL.

Color. YELLOW light at night.

Indication. PROCEED with CAUTION, prepared to stop at Home Signal.

Name. CAUTION Signal.



No.15

INTERLOCKING DISTANT SIGNAL.

Color. GREEN light at night.

Indication. PROCEED.

Name. CLEAR Signal.

No.16

DWARF SIGNAL.

Color. RED light at night.

Indication. STOP.

Name. STOP Signal.

No.17

DWARF SIGNAL.

Color. YELLOW light at night.

Indication. PROCEED with CAUTION

Name. CAUTION Signal.

SPECIAL RULES.

REFERENCE MARKS

1. Car capacity of passing tracks based on 42 feet to the car inside of clearance points, and does not allow for engines and cabooses.

2. In addition to signs provided in Rule 7, Book of Rules, the following signs in column headed "signs."

P—Dispatchers' telephone, accessible at all times.
I—Interlocked.
K—Connection with foreign road.
•—Standard clock.

DERAIL SWITCHES

Chiwaukum House track.
Cascade Tunnel, east passing track lead.
Tye, west end industry track, and at west end No. 3 track outside shed, and west end No. 1 track.
Corea, west end industry.
Scenic, industry track.
Alpine, industry track and mill spur.
Grotto, industry track and mill spur.
Skykomish house track.
Index, industry track.
Reiter, west end industry track.
Pacific Avenue, Brewery spur, Frye-Bruhn spur.
Everett, power house spur.
Skagit Crossing, English Log spur.
Mt. Vernon, Pacific Northwest Traction Co. transfer.
Bellingham B. & N. transfer.
Ardley, power house transfer.
Ferndale, industry track.
Abbottsford, east end of passing track.

PERSONAL INJURIES.

1. Whenever passengers or employes are injured, everything must be done to care for them properly. If they are able to be moved, take them for treatment to the nearest place at which the Company has a surgeon. If they cannot be moved, call the nearest Company surgeon. If the case is urgent and the Company surgeon cannot be immediately procured, the conductor, agent or officer in charge is authorized to call the nearest surgeon available to administer first aid and care for the patient until the Company surgeon can take charge of the case.

   No surgical operation must be performed until the arrival of the Company surgeon, unless it may be required for the immediate safety of the patient.

2. In cases of serious accidents to trains, conductors, after making everything safe, must give their undivided attention to the care and comfort of their passengers, especially to those who are injured. Bedding and linen may be taken from sleepers for this purpose, the conductor keeping careful account of all material so taken, and its return or safe keeping attended to; and, when necessary, injured persons may be put in the sleepers.

   When a number of persons are injured, the service of competent surgeons in the vicinity should at once be secured, and every possible effort made to care for the injured, the Division Surgeon being notified by wire to come immediately to the place of the accident.

3. When tramps, boys and other persons, climbing on or jumping from moving trains, or persons walking or lying on the track, are injured or killed, they should be sent to their homes or placed in charge of the local county, city or village authorities, and no expense incurred on the part of the Company in the matter.

4. When people are killed away from a station the body should be picked up and taken to the nearest station and the authorities notified. Never take a body out of the county where the accident happened if it can be avoided, but if there is no station in that county take it to the nearest station in the next county, notifying the county authorities in all cases.

5. A report of all accidents must be made, and immediately sent by wire to Superintendent, giving all information.

   In reporting accidents to trains carrying passengers, conductors should give the correct names of the injured and uninjured, the addresses and destinations of all persons on the train, and of the injured, and the extent of their injuries. This report must be sent from first telegraph office to the General Claim Agent and to the Assistant Claim Agent in whose jurisdiction the accident occurs.

   As soon as possible thereafter Form 245 should be made out by each employe and forwarded to the Superintendent of the Division; a separate report being made for each person injured.

6. Every effort must be made to procure the names and addresses of all persons, outsiders as well as employes, who witnessed the accident, especially when persons are injured within the corporate limits of any city, town or village, or when crossing the tracks at a public highway.

7. In every case of personal injury in any Department, a full and complete report must be made at once by every employe immediately present, no matter whether he considers his statement of importance or not, answering every question as fully as possible.

8. When persons are injured by an accident which may have been caused by defective appliances, tools or machinery, the car or appliance, tool or machinery must be immediately examined by the person in charge to ascertain its condition, and report made of the inspection, giving the numbers and initials of cars examined, with names, occupation and address of the persons making the inspection. This inspection must be made before the car or engine leaves the place where the accident occurred, and afterwards at the first district terminal by the inspector, foreman, or Master Mechanic at such point, the Superintendent to notify such person of the necessity of making such examination. When an accident is caused by the breaking of machinery, tools, appliances or rails, the broken parts must be so marked as to be readily identified, and immediately turned over to the Superintendent.

9. This Company will not recognize any responsibility for board, medicine, nursing or surgical attention furnished by other than Company Surgeons, except for the emergency service required under Rules 1 and 2, unless authorized by the Superintendent, General Claim Agent, or a general officer of the Company, and when so authorized the General Claim Agent should at once be notified.

COMPANY SURGEONS.

Dr. J. A. Quinn, Chief Surgeon, Room 124 Great Northern Building, St. Paul.
Boeckman and Boeckman, Ophthalmic Surgeons, 642 Lowry Building, St. Paul.

Leavenworth	DR. G. W. HOXSEY.
Index	DR. O. R. VOSS.
Sultan	DR. O. R. VOSS.
Monroe	DR. H. K. STOCKWELL.
Everett	DR. C. A. MEAD and W. T. FLYNN.
Interbay	DR. R. J. McCURDY
Seattle	DR. J. C. MOORE,
Seattle	DR. R. W. PERRY, Oculist.
Portland, Ore	DR. R. C. McDANIELS, 923 Electric Bldg
Vancouver, Wash	DR. J. T. GUERIN.
Tacoma	DR. JAMES A. LA GASA.
Burlington	DR. H. E. CLEVELAND.
Bellingham	DR. W. A. KIRKPATRICK.
Blaine	DR. A. A. SUTHERLAND.
New Westminster	DR. GEO. E. DREW.
Vancouver	DR. A. S. MONRO.
Anacortes	DR. H. E. FROST.

TIME INSPECTORS.

Leavenworth	F. E. CARLQUIST.
Seattle	W. W. HOUGHTON & SONS, Frye Hotel.
Burlington	J. H. CROSSBY.
Everett	ROBT. ANDERSON.
Bellingham	WILBER GIBBS.
New Westminster, B. C.	W. C. CHAMBERLAIN.
Sumas	HENDRICKSON BROS.
Vancouver, B. C	ROBERT McDONALD.
Tacoma, Wash	RICHARD VEATH.
Centralia, Wash	BEN SALICK.
Portland, Ore	A. L. FIELD.
Monroe, Wash	O. E. WILLIAMS
Vancouver, Wash	COOVERT & CARTER.

Delta—

E. O. WADHAMS, Dispatcher.
T. H. REED, Dispatcher.
C. O. JOHNSON, Dispatcher.
H. L. CAULKINS, Dispatcher.
G. E. WELLEIN, Dispatcher.
N. WELLEIN, Dispatcher.
H. W. FISH, Dispatcher.
C. E. LAMKIN, Dispatcher.
C. E. McKILLIPS, Dispatcher.
D. MOORE, Asst. Chief Dispatcher.
J. C. DEVERY, Chief Dispatcher.
M. J. WELSH, Trainmaster.
P. M. LONG, Trainmaster.
J. E. GOUDIE, Trainmaster.

CANADIAN FLAGGING RULES.

GENERAL ORDER No. 188 OF THE BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

AS AMENDED BY GENERAL ORDER NUMBER 248

The following rules must be observed and complied with by all employes in the performance of FLAGGING in Canada:

1. Before undertaking any work **which will render the main track impassable, or if rendered impassable from any cause or defect, trackmen, bridgemen, or other employes of the Company shall protect the same as follows:**

2. **(a) on double track; (b) on three or more tracks; (c) in mountain territory; and (d) on all lines with frequent or fast train service.**

   Send out a flagman in each direction with stop signals, at least—

   1500 feet in daytime, if there is no down grade towards the obstruction within one mile, and there is a clear view of 6000 feet from an approaching train.

   3600 feet at other times and places, if there is no down grade towards the obstruction within one mile.

   5400 feet if there is a down grade toward the obstruction within one mile.

   The flagman must, after going the required distance from the obstrection to insure full protection, take up a position where there will be an unobstructed view, of him from an approaching train of, if possible 1500 feet, first placing two torpedoes on the rail (not more than 200 or less than 100 feet apart), on the same side as the engineer of an approaching train, 300 feet ebyond such position. The flagman must display a red flag by day and a red light by night, and remain in such position until recalled or relieved.

3. On other lines—

   (a) By day place a red flag and, in addition, by night a red light, on the same side of the track as the engineer of an approaching train, at a point 600 feet from the defective or working point, with two torpedoes placed on the rail opposite each other so as to cause but one explosion, 150 feet in advance of the red signal, and provide further protection as follows:

   (b) By day place a red flag, and, in addition, by night, a red light; on the same side of the track as the engineer of an approaching train so that it will be clearly in his view, at least—

   3600 feet from the defective or working point, if there is no down grade towards the obstruction.

   5400 feet if there is a down grade within one mile of the obstruction, or as much farther as may be necessary to insure full protection.

   (c) Place two torpedoes (not more than 200 or less than 100 feet apart) on the rail on the same side as the engineer of an approaching train, 300 feet in advance of the red signal.

   (d) Between sunset and sunrise and during stormy, foggy, or smoky weather conditions flagmen must be placed instead of outer signals referred to in Clause (b).

4. Trains stopped by flagmen, as per Rule 2 and Rule 3 (d), shall be governed by his instructions and proceed to the working point or working point signal, as the case may be, and there be governed by signal or instructions of the foreman in charge.

5. Trains stopped by red signal, as per Rule 3 (b) shall replace the torpedoes exploded and proceed to the working point signal, and there be governed by signal or instructions of the foreman in charge, unless in the meantime stop signal had been removed.

6. In the event of train order protection being provided, the defective or working point must be marked by signals placed in both directions as follows:

   Yellow flags by day and in addition yellow lights by night, 3600 feet from the defective or working point ,red flags by day, and in addition, red lights by night, 600 feet from the defective or working point, on the same side of the track os the engineer of an approaching train; except on double track, where trains run to the left, in which case signals shall be placed to the left hand side as seen by an engineer of an approaching train, and there is a clear view of at least 1200 feet.

7. When weather or other conditions obscure day signals, night signals must be used in addition.

8. "Frequent Service" shall mean nine or more trains a day and "Fast Train Service" shall mean a service at a speed of thirty-five miles or more an hour.

9. That a signal of a serviceable type to be approved by the board to be used to display the signals directed to be provided under Rules 3 (b) and 6 (Yellow Signal) of this order and Rule 35 (Yellow Signal) of the uniform code of operating rules.

10. **Flagmen must each be equipped for day-time with a red flag and four torpedoes, and for night time, when the weather or other conditions obscure day signals, a white light, four torpedoes, three red fuses, and a supply of matches.**

GREAT NORTHERN RAILROAD

AND CONNECTIONS

DOUBLE TRACK

UNDER CONSTRUCTION

PROPOSED LINES

McGill-Warner Co., St. Paul, Minn.