

CASCADE SUBDIVISION (0841)

Mile Post	Rule 6.3	CP #'s	Radio Display: Oakridge to Crescent Lake -1414 Crescent Lake to Klamath Falls - 9696		Sta. #'s	Siding Feet
			SOUTH ▼ STATIONS ▲	NORTH ▲ STATIONS ▼		
580.5	CTC	VP580	OAKRIDGE	!BT	OZ465	6808
579.1		VP579	(4.8)			
575.7		VP576	PRYOR	!	OZ460	6757
574.3		VP574	(5.4)			
570.3		VP570	McCREDIE SPRINGS	!	OZ454	8520
568.6		VP568	(5.6)			
564.7		VP565	HEATHER	!	OZ449	5852
563.5		VP563	(4.0)			
560.7		VP561	WICOPEE	!	OZ445	5401
559.6		VP559	(5.1)			
555.6		VP556	FIELDS	!T	OZ439	8590
553.9		VP554	(4.0)			
551.6		VP552	EAST FRAZIER			
			(1.1)			
550.5		VP550	WEST FRAZIER			
			(4.1)			
546.4		VP546	CRUZATTE	!	OZ430	4820
545.4		VP545	(5.2)			
541.2		VP541	ABERNATHY	!	OZ425	8590
539.4		VP539	(4.4)			
538.8		VP537	CASCADE SUMMIT	!	OZ421	7887
535.3		VP535	(7.8)			
529.0		VP529	CRESCENT LAKE	!BT	OZ413	9575
527.1		VP527	(13.4)			
515.6		VP516	MOWICH	!	OZ399	6462
514.3		VP514	(2.4)			
513.2			GILCHRIST JCT.		OZ398	
			(9.1)			
504.1		VP504	CHEMULT	!	OZ388	9266
502.8		VP503				
502.2	VP502	(5.6)				
498.5	VP498	DIAMOND LAKE	!	OZ383	6160	
497.2	VP497	(5.5)				
493.0	VP493	YAMSAY	!	OZ377	6150	
491.8	VP492	(8.8)				
484.2	VP484	LENZ	!	OZ368	6162	
482.9	VP483	(9.3)				
474.9	VP475	FUEGO	!	OZ359	6189	
473.6	VP474	(8.5)				
466.4	VP466	CALIMUS	!	OZ350	7161	
464.9	VP465	(8.4)				
458.0	VP458	CHILOQUIN	!	OZ341	6218	
456.8	VP457	(9.9)				
448.1	VP448	MODOC POINT	!	OZ332	6156	
446.9	VP447	(8.8)				
439.3	VP439	ALGOMA	!	OZ324	6152	
438.0	VP438	(4.5)				
434.8	VP435	WOCUS	!	OZ319	6241	
433.5	VP433	(4.9)				
429.9	YL ABS	VP430	KLAMATH FALLS	Y	OZ313	
427.4		VP427	KLAMATH FALLS YARD	BTY		
(153.1)						
SI-01 MAIN TRACK AUTHORITY						
CTC between MP 580.5 and MP 429.9.						
Yard Limits Rule 9.15 Track Permits between MP 429.9 and MP 427.4.						

SI-02 MAXIMUM SPEED TABLE			
Maximum Speed		MPH	
Between Mileposts			
580.5 and 427.4			
(Except as Below)		PSGR	FRT
580.5 and 558.5	S	33	60
558.5 and 557.1	S	30	30
580.5 and 558.5	N	33	25
558.5 and 557.1	N	30	25
557.1 and 556.7		25	20
556.7 and 554.0	S	33	30
556.7 and 554.0	N	33	25
554.0 and 553.5		27	25
553.5 and 550.6	S	33	30
550.6 and 547.0	S	33	25
547.0 and 537.3	S	33	30
553.5 and 537.3	N	33	25
537.3 and 533.1		45	40
533.1 and 528.8		55	50
528.8 and 523.5		75	60
523.5 and 510.3		55	50
510.3 and 508.7		65	60
471.1 and 467.7		70	60
467.7 and 461.7		40	40
461.7 and 454.8		50	45
454.8 and 445.1		70	60
445.1 and 444.9		65	60
444.9 and 439.1		70	60
439.1 and 438.6		55	50
438.6 and 434.3		65	60
434.3 and 430.7		45	40
430.7 and 429.9		40	40
429.9 and 428.5		25	25

SI-03 OTHER SPEED RESTRICTIONS	
Maximum Speed	MPH
1. Thru Sidings & Turnouts	
Lenz	10
2. Dual Control Switch Turnouts (No Exceptions.)	
3. Misc. Speed Restrictions	
Klamath Falls Yard: all yard tracks except Trks 001, 002, 017 and 025..... 5	

SI-04 MAIN TRACK DESIGNATIONS - None.

SI-05 MILEPOST EQUATIONS - None.

SI-06 DTC BLOCK LIMITS - None.

SI-07 ITEM 13 TRAIN DEFECT DETECTORS

% 580.1	% 544.5	% 464.2
% 579.2	% 543.0	(#) 458.7
% 577.7	(#) 541.6	% 452.6
(#) 571.9	% 538.7	(#) 442.6
% 567.3	% 537.6	% 436.5
% 562.7	% 532.2	
% 561.6	% 526.4	
** 557.4	(#) 519.7	
(#) 557.3	% 508.3	
% 552.8	(#) 501.1	
% 550.5	% 494.4	
% 549.6	(#) 487.1	
% 549.0	% 479.8	
% 548.1	(#) 472.0	
% 547.0	% 468.1	

**Wheel Impact Detector MP 557.4: When a defect is detected, make a walking or rolling inspection of train for built up tread, broken wheel, flat spots and other wheel surface defects. The detector will transmit a "No Defect" message if no defects are detected after the train passes the detector. If the detector fails, be governed by the following:
Failed Detector Situation & Required Action:

- a. Track bulletin or verbal information from the train dispatcher instructs crew that the detector is out of service - Proceed at maximum authorized speed.
- b. Detector announces "Detector Malfunction" message and defect message was not received - Proceed at maximum authorized speed; report condition to train dispatcher.
- c. Detector announces "Detector Malfunction" message and a defect message was received - Make a walking and/or rolling (not exceeding 5 MPH) inspection of entire train on both sides for defects; report condition to train dispatcher.
- d. Crew members do not receive exit message from detector - Proceed at maximum authorized speed; report condition to train dispatcher.
- e. Crew members do not understand the exit message from the detector and a defect message was not received - Proceed at maximum authorized speed; report condition to train dispatcher.
- f. Crew members do not understand the exit message from the detector and a defect message was received - Make a walking and/or rolling (not exceeding 5 MPH) inspection of entire train on both sides for defects; report condition to train dispatcher.

SI-08 RULES ITEMS

Rule 8.20 Oakridge: Switch-point derail located 1,215 feet from switch on Bald Knob lead must be secured by locked switch lock when lined for movement in and out of Bald Knob.

Rule 30.7.1 Northward passenger trains must make running air brake test before passing Cascade Summit.

SI-09 FRA EXCEPTED TRACKS

Chelsea: Trks 708 and 710.

Klamath Falls Yard: Trks 401, 700, 013, 416, 501-524.

SI-10 BUSINESS TRACKS

Track Name	MP	STA. #'S
Chelsea	431.9	OZ317

SI-11 INDUSTRIAL LEADS - None.

SI-12 TONNAGE RESTRICTIONS/TPOB

Maximum Gross Weight: 158 tons

On descending grade between Cascade Summit and Oakridge the following table must be used to determine the maximum allowable speed taking into account freight train's TPOB and tons per axle of operative dynamic brake.

Tons Per Operative Brake:	Tons Per Dynamic Brake Axle:	Maximum Speed:
Below 80	300 or less	25
	300+ thru 420	25
	420+ thru 550	25
80+ thru 100	300 or less	25
	300+ to 420	25
	420+ to 550	20
100+ thru 145	300 or less	20
	300+ to 420	20
	420+ to 550	20

When computing maximum speed for descending grade restrictions, helper engine may be used in determining tons per axle of operative dynamic brake.

A train that exceeds the table, one that experiences dynamic brake failure, or if the use of full dynamic brakes and an 18-pound brake pipe reduction will not control the train at the allowable speed, the train must be STOPPED and sufficient hand brakes set to prevent movement. The train must not proceed until additional dynamic braking is obtained, tonnage reduced, or retainers on all cars are placed in operative position. The train must not proceed except as instructed by the district Manager of Operating Practices. Refer to Rule 31.7 for retainer use instructions.

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SI-13 TRAIN MAKE-UP RESTRICTIONS

Following applies when operating from Oakridge to Cascade Summit:

- a. Road locomotive of a loaded bulk commodity unit train must not exceed 32 axles of power.
- b. Road locomotive of other than a loaded bulk commodity unit train must not exceed 24 axles of power.

Exception: When isolating locomotive units in a consist to reduce the number of axles to the maximum limit, if the isolation of an additional locomotive unit brings the total number of axles BELOW the limit, this unit may be left on line in excess of the maximum number indicated above.

Rule 31.8.2 Helper Placement:

Between Dougren and Cascade Summit, trains having 8,000 or less tons will use the following to determine the maximum axles of power that may be used by an entrained helper:

Train tonnage of 6,300 or less - 12 maximum axles of power;

Train tonnage of 6,300+ thru 8,000 - 18 maximum axles of power.

Oakridge to Cascade Summit:

Locomotive Tonnage Ratings for cut-in Helper placement

Model	Consist With DC		Model	Consist With DC
B23-7	1000		SD38-2	1237
B30-7, B36-7	1067		SD39	1300
B39-8, B40-8	1844		SD40, SD40-2, SD40T-2	1550
C30-7	1898		SD45	1542
C36-7	2286		SD45-2, SD45T-2	1621
C39-8	2424		SD50, SD50M	2220
C40-8	2455		SD60, SD60M	2377
C41-8	2533		SD70M	2523
C44-9	2807		SD70MAC	2259
C44AC, C60/44	2934		SD90/43	2847
C60AC	3640		SD90AC	3597
GP15, GP15-1	878			
GP30, GP35	1026		Model	All AC Consist
GP38, GP 38-2, GP39-2	1055		C44AC, C60/44	3606
GP40, GP40-2, GP40P-2	1095		C60AC	3649
GP40X	1083		SD70MAC	3025
GP50	1572		SD90/43	3562
GP60	1844		SD90AC	3606

In addition, be governed by applicable sections of Rule 31.8.2.

Train Make-up Restrictions Applicable Between Oakridge and Cascade Summit.

Maximum Trailing Tonnage

Type of Car	1,000 Tons	2,500 Tons	3,600 Tons	4,800 Tons
Two-Axle Front Runner Car (P12)	Weighing less than 25 tons	Weighing 25 tons or more		
Solid Drawbar-Connected Two-Axle Car (P2,P3)	All cases			
Articulated Double Stack Car (P3A,P3B,P5A,P5B)			One or more empty platforms	
Multi-platform articulated Spine Car (P53)			One or more empty platforms	
Car 73' or longer in length weighing less than 50 tons			Coupled to a car less than 73' in length	Coupled to another car 73' or longer in length

When train tonnage exceeds 3,600 tons, each of the first five cars behind the road engine must weigh at least 50 tons. This restriction will not apply if train does not contain five cars that weigh 50 tons or more.

When train tonnage exceeds 4,100 actual tons, each of the first five cars behind the road engine must weigh at least 50 tons and:

1. Be 73 feet or longer in length; or
2. Be less than 73 feet in length.

In determining train make-up restrictions above, be governed by the following:

Articulated double stack cars (P3A,P3B,P5A,P5B) or spine car (P53) having all platforms loaded is to be considered the equivalent of 2 1/2 cars, each weighing 50 tons and each less than 73' in length.

Two-unit solid drawbar-connected long cars: (P2)

a. If the total weight of the car is 120 tons or more, it is to be considered the equivalent of two cars, each weighing 50 tons and each over 73' in length.

b. If the total weight of the car is less than 120 tons, it is to be considered the equivalent of two cars, each weighing less than 50 tons and each over 73' in length.

Three-unit solid drawbar-connected double stack cars (P3A, P3B):

a. If the total weight of the car is 200 tons or more, it is to be considered the equivalent of three cars, each weighing 50 tons and each less than 73' in length.

b. If the total weight of the car is less than 200 tons, it is to be considered the equivalent of three cars, each weighing less than 50 tons

and each less than 73' in length.

Coupler Limits:

The actual trailing tonnage behind a car must not exceed the coupler limit specified when ascending a grade.

Coupler Table:

From/To	Standard	High Strength		
Oakridge to Cascade Summit	6000	9610		

Subtract total locomotive tonnage rating for any helper engine that is positioned within the trailing tonnage behind the car. This final figure is the actual trailing tonnage.

Each car is to be considered equipped with a standard type coupler unless it is known the car is equipped with high strength couplers. If it is not known that a car is equipped with high strength couplers, it can be determined by looking at the coupler casting identification located on top of the coupler. A high strength coupler will have the letter "E" as the LAST character of identification. Examples of high strength coupler identifications are E60HTE, SBE60CE, E60DE.

On descending grade between Cascade Summit and Oakridge the following table must be used to determine the maximum allowable speed taking into account freight train's TPOB and tons per axle of operative dynamic brake.

SI-14 MISC. INSTRUCTIONS

Klamath Falls Yard: Do not use more than eight axles of power when switching on trks 006-013. No southward through trains can use tracks 3,4 or 6.

Fueling is to be done on Engine House Fueling Trk. # 1 only.

Klamath Falls, Klamath Falls Yard and Texum

Freight trains must receive permission from train dispatcher or his representative before:

- a. Entering main track between MP 427.3 and MP 429.8;
- b. Occupying trks 001, 002, 017 and 025;
- c. Occupying track at Texum;
- d. Departing from Texum, Klamath Falls or Klamath Falls Yard.
- e. Southward BNSF or UP freight trains can pass Portland St. (MP 430.3).

Oakridge: When an northward train is to be held attended or unattended at Oakridge for more than 45 minutes, the engine must be cut off and located on another yard track west of MP 581.4.

Trilevel Cars TTQX (type M3X), BNSF 306000-306153 and GVSR 89000 - 89058 must not be operated on the Cascade Subdivision.

Unless otherwise authorized, train and engine crews must have a Scott Scram Pack breathing device in their possession when working between Oakridge and Crescent Lake. Employees regularly assigned to Hill pool and helper pool will be issued a Scott Scram Pack. Extra board employees called for freight service on Cascade Subdivision must request a Scott Scram Pack from employee on duty at Eugene or Klamath Falls yard office when reporting for duty and must return the Scram Pack upon completion of service. Used breathing devices must be exchanged for new ones.

To activate the Scott Scram unit, place the hood over your head and pull the activation pin. This will provide approximately 15 minutes of oxygen.

Do not smoke or be around open flames immediately after using a Scott Scram unit.

Snow Conditions:

- A. When spreader is connected in multiple with engine, Rule 30.3.3 Procedure for Inspection and Test of Locomotive Brakes must be performed by engineer when taking charge.
- B. To prevent build-up of ice on brake shoes and to ensure that air brakes are effective, engineer operating engine with flanger must make an automatic brake pipe reduction of sufficient amount to allow both engine and flanger brakes to apply. This test must be made at approximately 10 minute intervals.
- C. Flangers operating in snow territory must raise flanger blades and stop while train or engine is passing on adjacent track.
- D. Rotary snowplows must be stopped with wings in the closed position when a train or engine is passing on adjacent track.
- E. Between Oakridge and Cascade Summit, flanger (operating snow equipment) may operate at 5 MPH above the maximum posted speed not to exceed 35 MPH.

Permanent Speed Signs -Tunnel 16:

Sign for eastward trains (25 MPH PSGR, 20 MPH FRT) normally placed at MP 556.2 is displayed at west portal of Tunnel 16, MP 555.98.