



COMPANY SURGEONS

*Dr. Abbott Skinner, Chf. Med. Officer	St. Paul, Minn.
*Dr. Charles T. Eginton, Asst. to Chf. Med. Officer	St. Paul, Minn.
*Dr. Darrell E. Westover	St. Paul, Minn.
*Dr. John F. Alden	St. Paul, Minn.
*Dr. Ernest R. Anderson	Minneapolis, Minn.
*Dr. Victor E. Ekblad	Superior, Wis.
Dr. Milton Finn	Superior, Wis.
Dr. Fred Johnson	Superior, Wis.
Dr. E. G. Stack	Superior, Wis.
Dr. Raymond J. Spurzem	Anoka, Minn.
Dr. Leroy J. Larson	Bagley, Minn.
*Dr. Einar W. Johnson	Bemidji, Minn.
Dr. T. P. Groschupf	Bemidji, Minn.
Dr. Wm. T. Nygren	Braham, Minn.
Dr. W. W. Will	Bertha, Minn.
Dr. G. E. Larson	Cambridge, Minn.
Dr. G. W. Schossow	Erskine, Minn.
Dr. George A. Sather	Fosston, Minn.
Dr. N. F. Musachio	Foley, Minn.
Dr. C. E. Norberg	Cloquet, Minn.
Dr. Gordon C. MacRae	Duluth, Minn.
*Dr. C. H. Coombs	Cass Lake, Minn.
Dr. E. W. Brockway	Grand Rapids, Minn.
*Dr. John B. Evensta	Grand Rapids, Minn.
*Dr. B. S. Adams	Hibbing, Minn.
Dr. Clarence Jacobson	Hibbing, Minn.
Dr. John J. Muller	Hibbing, Minn.
Dr. R. L. Christie	Long Prairie, Minn.
Dr. Paul J. Keith	Milaca, Minn.
Dr. C. S. Bossert	Mora, Minn.
Dr. E. G. Hubin	Sandstone, Minn.
*Dr. H. W. Goehrs	St. Cloud, Minn.
Dr. G. H. Goehrs	St. Cloud, Minn.
*Dr. J. F. DuBois	Sauk Centre, Minn.
*Dr. Julian F. DuBois, Jr.	Sauk Centre, Minn.
*Dr. John C. Grant	Sauk Centre, Minn.
Dr. E. N. Peterson	Virginia, Minn.
Dr. J. Arnold Malmstrom	Virginia, Minn.
*Dr. Luther F. Davis	Wadena, Minn.
Dr. O. F. Ringle	Walker, Minn.

*Designates also Examining Surgeon.

OPHTHALMIC SURGEONS

(Eye Doctors)

Dr. Edward P. Burch	St. Paul, Minn.
Dr. Charles E. Stanford	Minneapolis, Minn.
Dr. Malcolm A. McCannel	Minneapolis, Minn.
Dr. John E. Power	Duluth, Minn.
Dr. T. J. Doyle	Superior, Wis.
Dr. Roger T. Thompson	Superior, Wis.
Dr. W. T. Wenner	St. Cloud, Minn.

E. G. STACK,
Chief Dispatcher.

C. W. HAMMER,
Chief Dispatcher.

R. R. McENARY,
Trainmaster.

W. R. RICHTER,
Trainmaster.

W. T. SLOAN,
Trainmaster.

T. G. HOOKER,
Trainmaster.

Scanned from the Dean Ogle Collection

GREAT NORTHERN RAILWAY COMPANY

MESABI DIVISION TIME TABLE 75

EFFECTIVE 12:01 A. M.

CENTRAL TIME

Sunday, June 19, 1960

E. F. OVIATT, Superintendent.

R. N. WHITMAN, General Manager.

A. W. CAMPBELL, General Superintendent Transportation.

Printed in U.S.A.

2 WESTWARD

FIRST SUBDIVISION

EASTWARD

Station Numbers	Car Capacity		SECOND CLASS		FIRST CLASS		Distance from Duluth	Time Table No. 75 Effective June 19, 1960 STATIONS	Telegraph Calls	Distance from St. Paul	SIGNS	FIRST CLASS		SECOND CLASS	
	Sidings	Other Tracks	407	19	23	24						20	408		
														Daily	Daily
J 139		82		L 3.30Pm	L 6.35Am		2.37	DU	159.97	RKDNXB	A 1.50Am	A 6.45Pm			
				A 3.36Pm	A 6.41Am						L 1.40Am	L 6.39Pm			

TRAINS BETWEEN ELEVATOR STATION AND DULUTH TERMINAL DEPOT ARE GOVERNED BY NORTHERN PACIFIC, DULUTH AND SUPERIOR TERMINALS TIME TABLE

						3.23	0.86 ELEVATOR STATION.....	DU	156.74					
				s 3.45	s 6.50	4.22	0.99 SUPERIOR.....	BY	155.75	RKPBRO	s 11.34	s 6.30		
J 136	Yard	5689				5.41	1.19 20TH ST.....		154.56	PX				
J 131		32				8.40	2.99 CENTRAL AVE.....		151.57	V				

FIRST CLASS TRAINS BETWEEN CENTRAL AVE. TOWER AND DULUTH TERMINAL DEPOT ARE GOVERNED BY NORTHERN PACIFIC, DULUTH AND SUPERIOR TERMINALS TIME TABLE

			L 9.30Pm	L 3.53Pm	L 6.55Am	8.67	0.27 CENTRAL AVE. TOWER.....	SU	151.30	RIDNPXJ	A 11.24Am	A 6.13Pm		A 12.12Am
J 130	Yard	297	9.34	3.56	6.57	10.37	1.70 SANDERS.....★	8	149.60	IRDNPXJ	11.22	6.11		12.08
J 123			9.42	3.59	7.00	13.43	3.06 BOYLSTON.....		146.54	PJ	11.19	6.08		12.02Am
J 121	95	7	9.58		f 7.06	18.54	5.11 DEDHAM.....		141.43	P	f 11.13			11.54
J 113	127	10	10.19	4.12	s 7.13	24.71	6.17 FOXBORO.....		135.26	P	f 11.06	5.56		11.44
J 109					f 7.19	29.99	5.28 HOLYOKE.....		129.98	P	f 11.00			
J 103	139	3	10.49	4.23	s 7.27	36.74	6.75 HICKERSON.....	NS	123.23	NP	f 10.53	5.46		11.26
J 99		4			s 7.32	40.65	3.91 DUQUETTE.....		119.32	P	f 10.49			
J 96		13	11.00		s 7.36	43.18	2.53 KERRICK.....	K	116.79	DP	f 10.45			11.16
J 91	110	14	11.08 ⁴⁰⁸	4.34	s 7.43	48.93	5.75 BRUNO.....		111.04	P	s 10.38			11.08 ⁴⁰⁷
J 82	135	25	11.20	4.41	s 7.53	57.31	8.38 ASKOV.....	RD	102.66	DP	s 10.29	5.30		10.56
J 76		426	11.28	s 4.48	s 8.03	63.17	5.86 SANDSTONE.....★	NA	96.80	DNPWXJ	s 10.22	s 5.24		10.46
J 67		23	11.48		s 8.12	71.99	8.82 HICKLEY.....	H	87.98	DP	s 10.13			10.31
	144	16	11.49	4.58	8.13	72.36	0.37 HICKLEY TOWER.....	HT	87.61	DNPI	10.10	5.14		10.30
J 59	167	6	12.02Am	5.07 ³⁰	s 8.21	80.21	7.85 BROOK PARK.....	8K	79.76	DP	s 10.02	5.07 ¹⁹		10.17
			12.03	5.08	8.22	80.54	0.33 BROOK PARK JOT.....		79.43	PJ	10.01	5.06		10.16
GA54	16	4	12.12		s 8.28	86.01	5.47 HENRIETTE.....		73.96	P	s 9.55			10.08
GA49	107	32	12.21	5.17	s 8.34	91.45	5.44 GRASSTON.....		68.52	P	s 9.49	4.57		9.59
GA43	59	35	12.29	5.22	s 8.40	96.72	5.27 BRAHAM.....	RA	63.25	DP	s 9.43	4.52		9.51
GA40		19	12.34		s 8.44	100.15	3.43 STARCHFIELD.....		59.82	P	s 9.39			9.46
GA38		30	12.39		s 8.48	102.64	2.49 GRANDY.....		57.33	P	s 9.35			9.40
GA33	104	123	12.47	s 5.31	s 8.55	107.52	4.88 CAMBRIDGE.....	CG	52.45	DNP	s 9.30	s 4.43		9.32
GA27		55	12.55		s 9.02	113.17	5.65 ISANTI.....	IS	46.80	DP	s 9.20			9.24
GA21	99	49	1.04	5.41	s 9.13 ²⁴	119.19	6.02 BETHEL.....	BE	40.78	DP	s 9.13 ²³	4.34		9.14
GA15		20	1.13		f 9.19	125.34	6.15 CEDAR.....		34.63	P	f 9.04			9.04
GA 9	99	13	1.21	5.51	f 9.24	131.03	5.69 ANDOVER.....		28.94	P	f 8.59	4.24		8.55
G 13			A 1.30Am	A 5.56Pm	A 9.29Am	136.99	5.96 COON CREEK JOT.....	CN	22.98	JRDNPV	f 8.54Am	L 4.19Pm		L 8.45Pm

TRAINS BETWEEN COON CREEK JUNCTION AND NORTHTOWN ARE GOVERNED BY NORTHERN PACIFIC TIME TABLE

TRAINS BETWEEN NORTHTOWN AND ST. PAUL ARE GOVERNED BY TWIN CITY TERMINALS TIME TABLE

			A 6.45Pm	A 10.20Am	159.97	22.98 ST. PAUL.....					L 8.10Am	L 3.30Pm		
			4.0	2.26	2.54						2.56	2.26		3.27
			32.1	56.3	47.2						46.8	56.3		37.2

Westward trains are superior to eastward trains of the same class.
SEE ADDITIONAL SPECIAL INSTRUCTIONS PAGES 8 THROUGH 11.

WESTWARD

SECOND SUBDIVISION

EASTWARD 3

Station Numbers	Car Capacity		SECOND CLASS		Distance from Duluth	Time Table No. 75		Telegraph Calls	SIGNS	SECOND CLASS	
	Sidings	Other Tracks		163 Soo Line Tues., Thur., Sat.		Effective June 19, 1960				162 Soo Line Mon., Wed., Fri.	
J125					13.43		BOYLSTON		P		
Y251	99	2			19.21		5.78 DEWEY		P		
Y249					23.09		3.88 STATE LINE TOWER	S	DNPI		
					26.93		3.84 BRIDGE 29		IP		
								ABS			
Y236	85	10			33.01		6.08 CARLTON	A	DNPI		
Y229		239			38.97		5.96 CLOQUET	KN	DPX		
Y213	138	81			55.45		16.48 BROOKSTON ★.....	BN	JDNPWXY		
Y205	185	3			63.31		7.86 PAUPORES		P		
Y195	193	64			73.27		9.96 FLOODWOOD	OD	DP		
								CTC			
Y189	185				79.37		6.10 ISLAND		P		
Y178	195	22			89.83		10.46 SWAN RIVER ★.....	WA	JDNP		
Y168	196				98.78		8.95 PHILBIN		P		
Y161	96	175			106.30		7.52 GUNN	GU	JYIDNPX		
Y159	92	240			109.34		3.04 GRAND RAPIDS	GR	DNXP		
Y157	48	30			113.04		3.70 SEYTON		PX		
								ABS			
Y156	123	9			114.23		1.19 COHASSET		P		
Y145	135	96			123.60		9.37 DEER RIVER	RI	DNPX		
Y138	70	16			130.70		7.10 BALL CLUB		P		
Y125	69	22			143.60		12.90 BENA	BA	DP		
Y118	123	4			151.15		7.55 SCHLEY		P		
								CTC			
				L 8.43Am	153.21		2.06 SOO JCT.		JPV	A 3.30Pm	
Y106	Yard	681		9.05	162.69		9.48 CASS LAKE ★.....	CS	JRDNKWXPYO	3.05	
Y 96	69	10		9.24	172.34		9.65 ROSBY		P	2.38	
Y 90	70	191		A 9.35Am	177.96		5.62 BEMIDJI	BM	JBDNPWXVI	L 2.24Pm	
Y 84	70	10			184.11		6.15 WILTON	N	DP		
Y 78		26			190.24		6.13 SOLWAY	SO	DP		
Y 72	69	27			196.44		6.20 SHEVLIN	YN	DP		
Y 65	75	76			203.14		6.70 BAGLEY	BY	DP		
Y 58	101	27			210.46		7.32 EBRO	RO	P		
Y 52	70	23			216.48		6.02 LENGBY	G	DP		
Y 45	70	109			223.50		7.02 FOSSTON	FO	DP		
Y 37	70	35			231.09		7.59 McINTOSH	MO	DP		
Y 31	72	37			237.14		6.05 ERSKINE	RS	DPI		
Y 24	71	34			243.79		6.65 MENTOR	MT	DP		
Y 17					250.53		6.74 TILDEN JCT.	ON	DPJV		
Y 12	70	29			255.17		4.64 BENOIT		P		
A298	Yard	359			267.62		12.45 CROOKSTON YARD		BOPYX		

TRAINS BETWEEN CROOKSTON YARD AND CROOKSTON ARE GOVERNED BY DAKOTA DIVISION TIME TABLE

					269.60	1.98 CROOKSTON		NBRDKX		
				.52 28.55		Time Over Subdivision Average Speed Per Hour			1.06 22.5	

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SEE ADDITIONAL SPECIAL INSTRUCTIONS PAGES 5 THROUGH 11.

WESTWARD SEVENTH SUBDIVISION EASTWARD

5

Station Numbers	Car Capacity		FIRST CLASS		Distance from Brook Park Jct.	Time Table No. 75		SIGNS	FIRST CLASS	
	Sidings	Other Tracks	11	3		Effective June 19, 1960			12	4
			Daily	Daily		STATIONS			Daily	Daily
J54		8			5.06	5.06	BROOK PARK JCT.	JP		
J48		59			6.33	6.33	QUAMBA	P		
J41	89	31			7.10	7.10	MORA	DP		
J34		12			6.88	6.88	OGILVIE	DP		
					25.37	25.37	BOCK	P		
J28	90	71			5.22	5.22	MILACA	BRDPX		
					0.64	0.64	MILACA JCT.	PJX		
J25		33			2.65	2.65	FORESTON	P		
J18		30			5.72	5.72	OAKS	P		
J17		11			2.77	2.77	RONNEBY	P		
J14	89	38			2.31	2.31	FOLEY	DP		
J10		33			4.30	4.30	PARENT	P		
G63	182		L 6.00Pm	L 9.42Am	58.15	58.15	EAST ST. CLOUD	DNPIX	A 11.31Am	A 4.13Pm
75	Yard 1501		A 6.08Pm	A 9.50Am	59.69	59.69	ST. CLOUD ★	RKDNW BXW	L 11.23Am	L 4.05Pm
			0.08 11.5	0.08 11.5			Time Over Subdivision Average Speed Per Hour		0.08 11.5	0.08 11.5

Cent. Ave. Tower ...Crossover
SaundersJct.
Br. 1.3End Dbl. Trk.

BoylstonJct.
Bridge 29Gantlet
GunnJct.

20 MPH—Trains handling the following equipment on Branch Lines or on 6 degree or sharper curves of Main Lines, scale test car, ore cars series 80000 thru 94250, air dump cars X-2000 thru X-2096, X-7000 thru X-7049 when such cars are loaded with ore or gravel.

15 MPH—Trains handling the following equipment on Branch Lines or on 6 degree or sharper curves of Main Lines, derricks, cranes, pile drivers, Jordan spreaders, shovels and wedge plows.

Trains or engines moving thru interlockings against the current of traffic on double track;

Trains or engines thru all other turnouts, except equilateral turnouts, and those shown previously in this item.

1(a). Rule 240-W of the Consolidated Code of Operating Rules is modified to permit handling Great Northern cars 60276 thru 60279, 61500 thru 61524 and 61000 thru 61009 in passenger trains at passenger train speeds.

2. MOVEMENT OF ENGINES DEAD IN TRAINS.

Engine 2350 must be handled on rear of train.

Single unit diesel engines moving dead in freight trains are to be handled not less than five (5) cars, or more than fifteen (15) cars from road engine.

Additional units are to be separated by not less than five (5) cars.

Multiple unit groups not exceeding four (4) units, all equipped with alignment control couplers moving dead in freight trains, are to be handled not less than five (5) cars from road engine. Additional groups or single units are to be separated by not less than five (5) cars.

Following speed restrictions must be observed when towing engines dead in trains:

MAXIMUM SPEED	ENGINE NUMBER
50 MPH	1 thru 12, 14, 15, 16, 24 thru 28, 75 thru 170.
79 MPH	260, 261, 266 thru 270, 275, 280, 281, 350 thru 365, 500 thru 512, 679, 680.
65 MPH	All other engine units not shown above.

3. Except at points where it is necessary to classify trains, open cars loaded with poles, piling, lumber, timber, pipe, or other lading which might shift, should be placed as close as possible to the head end of train, but not next to engine, cabooses, occupied outfit car or passenger car. Loaded trailer-on-flat cars are not included in this category. In double track territory, trains handling such cars must use extreme care to avoid slack running in or out when passing or being passed by other trains. In single track territory, trains handling such cars must be at stop when on siding or other track to meet or be passed by other trains, except when have more cars than siding will hold, it is permissible for such trains to pull by each other at restricted speed. Loaded dump cars should not be handled on double track after dark, but if necessary to do so, close watch must be maintained by members of the crew, and if a car dumps its load, train must be stopped at once and protection provided as prescribed by the rules.

4. Brakemen with less than one year of experience should not be used as flagmen except in emergency, and then Superintendent will be notified by wire.

5. When operating snow machines in non-block signal territory no train should be permitted to follow closer than a station apart, when that cannot be done they will be blocked not less than thirty minutes apart.

After severe blizzard or dirt storm, employes on first train over road must exercise care to avoid accident caused by striking drift without first having drifts faced with hand shovels, cutting

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SEE ADDITIONAL SPECIAL INSTRUCTIONS PAGES 5 THROUGH 11.

SPECIAL INSTRUCTIONS

ALL SUBDIVISIONS

1. SPEED RESTRICTIONS GENERAL.

The following speed limits apply to trains and engines operating under the conditions outlined, unless rules or conditions require a further reduction.

50 MPH—Diesel engines light or with caboose only.

35 MPH—Trains or engines on main routes, actuating the points of spring switches;

Trains or engines thru No. 20 turnouts at following locations.

SaundersCrossover	BrookstonJct.
BoylstonCrossover	BrookstonEnd Dbl. Trk.
DedhamSiding	PauporesSiding
AskovSiding	FloodwoodSiding
Hinckley TowerSiding	IslandSiding
Brook ParkSiding	Swan RiverJct.
Brook Park Jct.Jct.	Swan RiverSiding
GrasstonSiding	PhilbinSiding
Coon Creek Jct.Jct.	BadenSiding
Coon CreekCrossover	FermoySiding
BrookstonCrossover	OnegaSiding

30 MPH—On Main lines, when handling following equipment in trains, not in actual service but on own wheels, derricks, cranes, pile drivers, Jordan spreaders, shovels, wedge plows, scale test car, also ore cars series 80000 thru 94250 and air dump cars X-2000 thru X-2096, X-7000 thru X-7049 when such cars are loaded with ore or gravel.

25 MPH—Trains handling logs;
Trains or engines moving in facing point direction at spring switches without facing point lock;
Trains or engines thru No. 15 turnouts at following locations:

in far enough to get beyond the hard snow and giving a perpendicular wall to strike against instead of slope or wedge-like shape. When operating snow dozer, conductor in charge will ride in the dozer.

On snow and dirt dozers every precaution must be taken to see that cage, flangers and wings clear all obstacles when in service and are properly secured when in through trains, and dozers properly turned. Hand screws must be tightened to raise flanger on dozers as high as possible before making a back-up movement, and must not be released until the dozing work is actually to start. Hand screws holding the cage on dozers must be tightened or chains otherwise fastened except when dozer has air in cylinders and is attended by an employee.

6. Due to limited overhead clearance at tunnels and structures, employees are warned to keep off top of cars of extreme height and width when handled in trains and yards, except in emergency. In absence of previous advice on such cars, wire proper officer for instructions.

7. Placarded loaded tank cars handled in through freight or mixed trains shall not be nearer than 6th car from engine, occupied caboose or passenger car.

Cars placarded "Explosives", "Flammable", "Corrosive Liquids", or "Poison Gas" handled in through freight trains, local and mixed trains, shall not be nearer than 16th car from engine, occupied caboose or passenger car.

When length of train will not permit handling of cars as prescribed above—ANY PLACARDED CAR, loaded with above commodities—shall be placed near middle of train, but not nearer than 2nd car from engine, occupied caboose or passenger car.

When switching such cars in terminal yards they must be separated from engine by at least one non-placarded car.

When placarded cars described above are handled in freight trains made up in "blocks" or classifications, placarded car or cars shall be placed near middle of the "block" or classification, but not nearer than 6th car from engine, occupied caboose or passenger car.

When such placarded cars are placed in trains they must not be placed next to each other, next to refrigerators equipped with gas-burning heaters, stoves or lanterns, or next to loaded flat cars, or gondola cars containing lading higher than ends of car that is liable to shift.

Carload express shipments of explosives, sealed and placarded, may be handled on passenger trains; LCL shipments may be made in so-called peddler car with messenger in charge when such car is assigned to the handling of express and baggage exclusively.

Terminal or pick-up points enroute must furnish conductor and engineer Form 250 showing consecutively location in train of all cars placarded "Explosives". At points other than terminals where crews change, notice will be transferred from crew to crew.

Employees will be guided by further instructions governing handling of loaded tank cars, Explosives, Flammables, Corrosive Liquids, and Poison Gas found in I.C.C. Regulations and Consolidated Code Rules 727 and 811.

8. Trains departing from stations, either from siding or main track in trailing point movement actuating points of spring switches, a member of crew must observe indication of governing signal in opposite direction after rear end of train has passed through switch to ascertain if switch points return to normal position. If this signal indicates Stop and no immediate train movement or other cause is evident, report the fact to Superintendent from first available point of communication. During and immediately following snow storms or violent wind storms, spring switches must be operated by hand and relined in normal position before heading out through switch in trailing point movement, actuating switch points, to insure switch is in proper operating condition.

9. Facing point locks on hand operated switches are indicated by a six-inch yellow stripe painted on target staff. Be positive locking device is restored to normal position after using. A

running switch must not be made through this type switch.

10. Before picking up cars of peeled pulpwood from industry at any station, conductor must examine lading; if lading is not protected with woven wire to prevent sliding out on sides, or, when wire is not available, with boards and stakes, then car must not be moved from industry. The fact must be promptly reported by wire to the Superintendent.

11. Whistle Signals for Routes at Junctions and Interlockings:

Routes	Whistles
Main Track	2 short, 1 long
Diverging route	2 long
Siding	4 short
Against current of traffic	1 long, 1 short

12. The Consolidated Code of Operating Rules, Edition of 1959, in addition to the following instructions will govern Great Northern employees while operating on Minnesota Transfer Railway Co. and St. Paul Union Depot Company trackage:

(a) All trackage of the Minnesota Transfer Railway Company is defined as a system of tracks within yard limits over which movements must be made at restricted speed and are not authorized by time table or train order, but subject to prescribed signals and rules, or special instructions.

The limits of the St. Paul Union Depot Co. property extend from connection with the Northern Pacific Ry. and Great Northern Ry. tracks at Third Street and connection with the CMStP&P-CB&Q R.R. tracks opposite depot roundhouse on the east, to connection with the CGW Ry. and CMStP&P R.R. tracks at Robert Street on the west.

(b) The time table of the St. Paul Union Depot Company is for information only. Employees of railroads using the tracks of this Company will be governed by current time table of their respective companies only as to arriving and departing time of trains.

(c) Where in the rules of the Consolidated Code reference is made to trains, such rules will also apply to yard movements and engines.

(d) Under Rule 11, the use of torpedoes is prohibited.

(e) Under Rule 15, burning fuses must not be used except in case of emergency and then only when held in hand and must be extinguished before leaving.

THE FOLLOWING RULES APPLY ONLY ON THE ST. PAUL UNION DEPOT COMPANY:

(f) There is no superiority of trains within the limits of St. Paul Union Depot Company property.

(g) Within the limits of the St. Paul Union Depot Company property, trains and engines must move at restricted speed and must not exceed ten (10) miles per hour through crossovers, turnouts and puzzle switches.

The entrance to, and all movements on this property, will be made only on authority of hand signals from switch tenders. No train or engine may foul any track or puzzle switch without authority of hand signals from switch tenders in control of such movements, except that short interior switching movements may be made through crossovers connecting shed tracks when authorized by train director.

Any lead or track may be used for the make-up of trains on authority of train director. The movement of trains should be given preference.

(h) When indicated by the ringing of the bell, flashing of head-light, hand or light signal that a train or engine is ready to move, the switch tender in charge of the shed track on which the movement is standing will handle as follows: at west end of station the switch tender will control the movement by hand or light signal; at the east end of station the switch tender will inform the train director, who will route the movement by instructions over the public address system. Switch tenders will be governed by these instructions, relaying such instructions by hand or light signal to the next switch tender in the direction of the movement. Each must receive an acknowledgment before signalling the movement. Signals must not be acknowledged or acted upon unless the signal corresponds with instructions from the train director and is definitely understood.

(i) When backing, the back-up air brake valve on passenger trains must be operated by the conductor, except in the movement of empty equipment it may be operated by a competent trainman or yardman. When practicable, conductors must see that trainmen are stationed so hand or light signals may be used in case of any emergency. When backing a train, the engine brake valve must be in running position. An application of the brakes must be made with back-up air brake valve before starting and it must be known that the brakes are in operative condition. Movement must not be started until the proper signal is given. A running test must be made with the back-up air brake valve before the train has moved 300 feet. If the running test is not made within 300 feet the engineer must stop the train and ascertain cause. The speed of train must not exceed eight (8) miles per hour; and train must be under such control that it can be stopped short of train or obstruction, and short of bumping post on stub tracks.

(j) Headlights must be dimmed while on shed tracks.

FIRST SUBDIVISION

(Main Line)

1. MAXIMUM PERMISSIBLE SPEED FOR TRAINS.

Between	Passenger	Freight
Central Ave. Tower and Boylston	75 MPH	50 MPH
Boylston and Foxboro	60 MPH	40 MPH
Foxboro and Coon Creek Jct.	79 MPH	50 MPH

2. SPEED RESTRICTIONS.

Duluth Terminal Bridge to G.N. Rices Point and G.N. connection to Seventh Ave. freight house, trains and engines at restricted speed not exceeding	20 MPH
Bridge 14.2, Boylston	Passenger 35 MPH
	Freight 10 MPH
Long lead, west end Sandstone Yard.....	15 MPH

3. TRAIN REGISTER EXCEPTIONS.

All trains register by ticket at Central Ave. Tower, Saunders, and Coon Creek Jct.

Eastward freight trains will throw off register check at Saunders giving all information called for in train register except arrival and tie up.

4. CLEARANCE PROVISIONS AND EXCEPTIONS RULE 83(B).

(a) At Boylston, Brook Park Jct., trains for which these points are initial stations may proceed on authority of clearance under which such trains arrive.

(b) Mesabi Division clearance received by first class trains and passenger extras at Minneapolis, and by other trains at Minneapolis Jct., will clear train at Coon Creek Jct. when train order signal indicates proceed.

5. RESTRICTED CLEARANCES.

Superior, bents under Fifteenth St. viaduct will not clear man on side of car or engine.

6. Second class and extra trains will use double track with the current of traffic without train orders or clearance between 25th Street, Superior, and Central Avenue Tower where they will receive train orders or clearance.

7. Hinckley, automatic block signal 72.1 governing westward trains, is located on left hand side of main track about 500 feet west of depot.

8. SPEED TEST BOARDS.

Engineers shall test speed of their trains passing following point as compared with Speed Table:

Westward, between MP 76 and MP 77 approximately 4 miles west of Hinckley Tower.

Eastward, between MP 77 and MP 76 approximately 8 miles east of Brook Park.

9. CROSSOVERS ON DOUBLE TRACK.

Facing Point	Trailing Point
Saunders, east crossover	Central Ave.
Boylston	Saunders, at tower.
	Boylston

10. SPRING SWITCHES WITH FACING POINT LOCK.

Dedham	siding	Grasston	siding
Nickerson	siding	Cambridge	siding
Askov	siding	Bethel	siding

Normal position is for main track.

11. SPRING SWITCHES WITHOUT FACING POINT LOCK.

Superior, east switch of Eastward and Westward incoming tracks. Normal position is for incoming tracks and all other round-house lead switches, when not in use, must be left lined for roundhouse lead.

Elevator "X", east and west of car unloader on unloading track. Normal position of switch west of unloader is for unloading track.

Normal position of switch east of unloader is for runaround track.

12. DRAGGING EQUIPMENT DETECTOR INDICATOR.

Eastward trains on Signal 15.6 between Boylston and Dedham. Westward trains on Signal 61.1 between Askov and Sandstone.

13. MANUAL INTERLOCKINGS.

Central Ave. Tower N. P. Ry. crossing
Coon Creek Jct. junction with N. P. Ry.

14. MANUAL INTERLOCKINGS WITH DUAL CONTROL SWITCHES.

Sandstone east and west yard switch

15. AUTOMATIC INTERLOCKINGS.

Superior
73rd St., MStP&SSM. RR. Crossing

16. Great Northern Transfers going to Great Northern Rices Point Yard will use C&NW track from bridge switch to switch in C&NW main track leading to new connection to Great Northern Rices Point Yard. Authority to use C&NW track will be given by clear signal at Minnesota Draw.

For movement from Great Northern Rices Point Yard to Superior, authority to use C&NW track must be obtained from Minnesota Draw by telephone—from phone located in booth just north of Birch Street between Great Northern and C&NW tracks—before leaving Rices Point Yard.

SECOND SUBDIVISION

(Main Line)

1. MAXIMUM PERMISSIBLE SPEED FOR TRAINS.

Between	Passenger	Freight
Boylston and Paupores	50 MPH	40 MPH
Paupores and Crookston Yard	59 MPH	45 MPH

2. SPEED RESTRICTIONS.

Between Home Signals of Interlockings at: 20 MPH
 Bridge 29, westward.
 Bemidji.
 Erskine.
 Crookston Yard.

Cass Lake, on all tracks over footwalk crossing located
 just west of mainline switch to roundhouse 8 MPH

Whistle signal must be sounded as prescribed by rule. Crossing must be cut immediately. When this crossing is blocked by coupling up train, trainmen must remain at the crossing to prevent pedestrians from crawling through the cars.

3. TRAIN REGISTER EXCEPTIONS.

Trains originating and terminating at Crookston Yard will register at Crookston Depot.

4. CLEARANCE PROVISIONS AND EXCEPTIONS RULE 83(B).

At Boylston, Brookston and Gunn, trains for which these points are initial stations may proceed on authority of clearance under which such trains arrive.

All trains must obtain clearance Form A at Cass Lake.

Mesabi Division clearance received at Crookston will clear train at Crookston Yard.

At Soo Jct., Soo Line Trains may proceed to Cass Lake without obtaining clearance Form A.

5. SPEED TEST BOARDS.

Engineers shall test speed of their trains passing following point as compared with Speed Table:

Westward, between MP 86 and MP 87 approximately 4½ miles west of Island.

Eastward, between MP 87 and MP 86 approximately 2 miles east of Wawina.

Eastward, between MP 86 and MP 87 approximately 2 miles east of Wilton.

Westward, between MP 87 and MP 86 approximately 8 miles west of Bemidji.

6. Cloquet, derails located near east end storage tracks Nos. 1 and 2 are not provided with derail signs.

Cloquet, when setting out cars on either end of No. 1 track be sure cars are shoved down far enough to clear N. P. Ry. crossings.

Cloquet, cars left on G.N. tracks must not be closer than 60 ft. each way from 10th Street crossing east of depot.

7. Grand Rapids, when setting out cars, eastward freight trains will stop and leave train west of west switch; westward trains will stop east of the first public crossing.

8. Lengby, Till Avenue Crossing, just west of depot: McIntosh, Cleveland Avenue Crossing, 200 ft. east of depot: Industry tracks do not include automatic road crossing protection and all train and engine movements over these crossings on industry tracks must be flagged by trainman on the ground.

9. International Refinery, Alford, while switching, do not handle cars over drip pans with brakes set as sparks from brakes create a fire hazard.

Account close clearance on old spur, do not put cars beyond 500 ft. from east derail.

Cabooses with fires in stoves not permitted on any of the plant tracks and crews working in the vicinity will refrain from smoking.

Tail hose located in telephone booth must be used on end of cuts shoved to Old No. 1 and Old No. 2 tracks with air coupled into it so that trainmen taking position on rear car of cut being shoved can control the movement over crossing immediately ahead of the unloading rack, as well as being able to stop cut of cars short of end of these two spur tracks.

10. CROSSOVERS ON DOUBLE TRACK.

Facing Point	Trailing Point
State Line, west crossover	State Line, east crossover
Carlton, east crossover	Alford
Cloquet, west crossover	Carlton, west crossover
Brookston, east crossover	Cloquet, east crossover

11. SPRING SWITCHES WITH FACING POINT LOCK.

Cass Lake, east yard switch.

Normal position is for main track.

12. SPRING SWITCHES WITHOUT FACING POINT LOCK.

Cass Lake, west crossover switch to roundhouse lead
 incoming roundhouse track
 outgoing roundhouse track

Normal position is for tracks named.

13. DRAGGING EQUIPMENT DETECTOR INDICATOR.

Eastward trains, on signal 30.2 approximately one mile west of Bridge 29.

Westward trains on Signal 28.1 approximately 1 mile east of Bridge 29.

14. MANUAL INTERLOCKINGS.

State Line Tower	N. P. Ry. crossing
Carlton	N. P. Ry. crossing
Erskine	MStP&SSM. RR. crossing

15. MANUAL INTERLOCKINGS WITH DUAL CONTROL SWITCHES.

Gunnjunction with 4th Subdivision

16. AUTOMATIC INTERLOCKINGS.

Crookston Yard, 2.37 miles east of.....	N. P. Ry. crossing
Bemidji	N. P. Ry. crossing
Bridge 29	gantlet
Bridge 29:	

Release for westward route on westward track is located in release box at eastward home signal.

Release for eastward route on eastward track is located in release box at westward home signal.

Cranks for hand operation of smashboards are attached by chains to the mechanism.

17. CTC—SOO JCT. TO CASS LAKE.

Telephones for communication with the control operator are located at the east end of CTC section and at the spring switch, east end of Cass Lake Yard, 1000 feet west of west end of CTC section. Westward Soo Line trains will call the operator at Cass Lake on phone for authority to enter G.N. main line. The following will govern in case of failure of communications: Soo Line crew will unlock switch and attempt to line for their movement. If switch will line and signal clears, this will be their authority to leave Soo Jct., and proceed to Cass Lake.

THIRD SUBDIVISION

(Park Rapids Line)

1. MAXIMUM PERMISSIBLE SPEED FOR TRAINS.

Between	Passenger	Freight
Park Rapids Jct. and Cass Lake	35 MPH	30 MPH

2. SPEED RESTRICTIONS.

Between Home Signals of Interlockings at:	20 MPH
Park Rapids Jct.	
Wadena.	

3. TRAIN REGISTER EXCEPTIONS.

All Third Subdivision trains will register at Sauk Centre.

4. CLEARANCE PROVISIONS AND EXCEPTIONS RULE 83(B).

Mesabi Division clearance received at Sauk Centre will clear train at Park Rapids Jct.

5. Cass Lake, normal position south wye switch is for east leg of wye.

6. AUTOMATIC INTERLOCKINGS.

Park Rapids Jct., 0.52 miles west of	N. P. Ry. crossing
Wadena, 0.23 miles west of	N. P. Ry. crossing

7. Block signal located at Mesabi Chief Mine spur normally displays indication, Rule 240(B) and governs movements from spur to main track; after lining switch, if no conflicting movement is evident on main track, movement may be made in accordance with signal indication after complying with Rule 513.

8. Trains and engines will run with the current of traffic between Kelly Lake and Emmert Tower without train orders or clearance, and must keep to the left unless otherwise provided.

9. Between Emmert Tower and DM&IR. Jct. east of Scranton, G. N. double track will be used jointly by DM&IR. trains. G. N. rules and special instructions will govern.

10. Between Wilpen Jct. and St. Clair Jct., and between Buhl and Dormer Jct., DM&IR. trains will use G.N. main track jointly and be governed by G.N. rules and special instructions. Normal position of switches at Wilpen Jct., St. Clair Jct., and Dormer Jct., is for G.N. 4th Subdivision.

11. Between St. Clair Jct. and Chisholm Jct., main track will be used jointly by G. N. and DM&IR. Rys. and authority for train movements is controlled by DM&IR. Ry. and DM&IR rules will govern. Eastward G. N. trains will secure clearance and orders from Operator at Emmert who must obtain authority from DM&IR. before issuing.

Westward G. N. trains will secure clearance and orders from G. N. Operator at Chisholm who must obtain authority from DM&IR. before issuing.

12. Train and engine movements from main line on new Hull Crusher Spur over Kelly Lake road crossing must be protected by a member of the crew due to restricted view approaching this crossing.

13. Susquehanna Shaft, necessary to shove all empties under the head frame, which will not clear a man on top or side of ore car. Crews must stop before shoving under the head frame and brakemen will walk by the shaft to a point where they can give signals in shoving empties onto the tail tracks.

When placing empties for shaft loading, fill the north tail track through the crossover first, as an engine will not go over this crossover. Then fill the south tail track. When placing empties for screener loading, fill the south tail track first, then the north tail track as an engine cannot move through the crossover into the south screener tail track.

14. Boeing crude ore unloading pocket, located five (5) feet east of No. 1 tail track switch, Bocking Mine, open between rails and on north side of track. Use caution when working in vicinity of this pocket and walk on south side of track.

15. Signal protection in service at Danube Mine Spur switch and crossover from Balkan Mining Company track to Danube Mine Tracks. Movements over this crossing will be governed by dwarf color-light signals, displaying indication Figure 6 of Rule 240-A or Figure 4 of Rule 240-H except eastward color-light signal for Balkan Mining Company will display Figure 3 of Rule 240-A or Figure 2 of Rule 240-H, all of the Consolidated Code. Normal position of switches is for Balkan Mining Company and for G. N. Ry. track from Danube Mine to washing plant. Signals will clear automatically for Balkan Mining Company and for G. N. Ry. from Danube Mine to washing plant. To obtain signal to cross-over the Balkan Mining Company track, G. N. Ry. trainmen should make sure there is no approaching conflicting movement, then line all three switches in the route to clear signal before proceeding. After crossover movement has been made, all three switches must be restored to normal position for Balkan Mining Company track and G. N. Ry. washing plant track.

FOURTH SUBDIVISION

(Gunn-Dormer Jct. Line)

1. MAXIMUM PERMISSIBLE SPEED FOR TRAINS.

Between	Passenger	Freight
Gunn and Emmert	45 MPH	35 MPH
Emmert and Dormer Jct.	35 MPH	30 MPH

2. SPEED RESTRICTIONS.

Between Home Signals of Interlockings at	20 MPH
Hill Annex Spur.	Hibbing.
Majorca Mine Spur.	North Mitchell.
	Emmert Tower.

3. Between Calumet and Oil Spur, located 1.47 miles west of Bovey, main track will be used jointly by G.N. and DM&IR. Rys. and authority for train movements is controlled by G.N. Ry. and G.N. rules and Special Instructions will govern.

4. St. Paul Mine Spur, Third Avenue, Keewatin, trains will not exceed a speed of 12 MPH through the approach circuits of the signal system covering crossing signals for Highway No. 169.

5. Harrison Mine Spur, Nashwauk, trains will not exceed a speed of 12 MPH northbound into the mine or 6 MPH southbound out of the mine through the approach circuits of the signal system covering crossing signals for Highway No. 169 crossing.

6. Telephone in service at Buckeye, Canisteo and Danube Mines switch. Crews coming from Buckeye, Canisteo and Danube Mines will communicate with the dispatcher and know that way is clear on the main track before proceeding with train down the descending grade on both legs of the wye.

16. CROSSOVERS ON DOUBLE TRACK.

Facing Point	Trailing Point
Hull Crusher	Mahoning
Ruby Jct.	Agnew
	Scranton
	Hibbing, east crossover
	Hibbing, west crossover
	North Mitchell

17. SPRING SWITCHES WITH FACING POINT LOCK.

Nashwauk, west north storage track switch.
west south storage track switch.
Calumet, west new yard switch.
Canisteo, west new yard switch.
Normal position is for main track.

18. SPRING SWITCHES WITHOUT FACING POINT LOCK.

Kelly Lake, west switch transfer cinder pit track,
Normal position is for mallet cinder pit track.
roundhouse wye tracks.
Normal position east switch is for mallet cinder pit track,
south switch is for east leg of wye.
west switch is for west leg of wye.
Kelly Lake, west wye switch,
Normal position is for 4th subdivision.

19. MANUAL INTERLOCKINGS.

Hibbing, 0.58 miles west ofScranton
Emmert TowerD. M. & I. R. Ry. crossing

20. MANUAL INTERLOCKINGS WITH DUAL CONTROL SWITCHES.

Hibbing, 0.29 miles west ofD. M. & I. R. Ry. Jct.
North MitchellD. M. & I. R. Ry. Jct.

21. SEMI-AUTOMATIC INTERLOCKINGS.

Calumet, 0.60 miles east ofHill Annex Spur
Calumet, 0.73 miles east ofMajorca Mine Spur
Complete instructions for operation of electric lock and gates at semi-automatic interlockings are located at "Release" boxes.

22. AT VIRGINIA.

G. N. Ry. trains to and from Virginia operate via D. M. & I. R. Ry. tracks between Emmert and Virginia.

SPEED RESTRICTIONS.

- (a) Between Home Signals of Interlockings at: 20 MPH
D. W. & P., Virmount Tower.
D. W. & P., Crescent Ave.
(b) Highway No. 53 crossing, 6th Avenue West, leading to Columbia Mine.
Trains must not exceed a speed of 10 MPH through the approach circuits of this crossing.
(c) Trains and engines must stop before passing over crossing U. S. Highway No. 53 leading to depot, and a member of crew on ground at the crossing will protect movement.

23. AUTOMATIC INTERLOCKINGS.

Virginia, 0.47 miles west ofD. W. & P. Ry. crossing
1.20 miles west ofD. W. & P. Ry. crossing

FIFTH SUBDIVISION

(Princeton Line)

1. MAXIMUM PERMISSIBLE SPEED FOR TRAINS.

Between	Freight
Elk River and Milaca Jct.	20 MPH

2. SPEED RESTRICTIONS.

Between Home Signals of Interlocking at Elk River.... 20 MPH

3. CLEARANCE PROVISIONS AND EXCEPTIONS RULE 83(B).

At Milaca Jct., trains for which this point is initial station may proceed on authority of clearance under which such trains arrive.

4. SEMI-AUTOMATIC INTERLOCKINGS.

Elk River, 0.74 miles west ofN. P. Ry. Jct.

SIXTH SUBDIVISION

(Casco Line)

1. MAXIMUM PERMISSIBLE SPEED FOR TRAINS.

Between	Passenger	Freight
Brookston and Kelly Lake	45 MPH	45 MPH

2. AUTOMATIC INTERLOCKINGS.

Onega, 5.95 miles west ofD. M. & I. R. Ry. crossing

3. DRAGGING EQUIPMENT DETECTOR INDICATOR.

Eastward Trains, on iron mast approximately 6400 feet east of Signal 62.2 about 2.5 miles west of Brookston.

SEVENTH SUBDIVISION

(Milaca Line)

1. MAXIMUM PERMISSIBLE SPEED FOR TRAINS.

Between	Passenger	Freight
Brook Park Jct. and East St. Cloud	50 MPH	40 MPH

2. SPEED RESTRICTIONS.

Bridge 46.3, Mora 20 MPH
Bridge 54.2, Quamba 20 MPH
Between Home Signals of Interlockings at: 20 MPH
Brook Park Jct.
East St. Cloud.

3. CLEARANCE PROVISIONS AND EXCEPTIONS RULE 83(B).

- (a) At Brook Park Jct., trains for which this point is initial station may proceed on authority of clearance under which such trains arrive.
(b) Trains originating at East St. Cloud may proceed without a clearance.

4. At St. Cloud, eastward freight trains must know before leaving there that route is clear at N. P. Ry. crossing, East St. Cloud.**5. MANUAL INTERLOCKINGS.**

East St. CloudN. P. Ry. crossing

WATCH INSPECTORS

Yano Bros., 1121 Tower AvenueSuperior, Wis.
Marcus Co., 728 Tower AvenueSuperior, Wis.
O. H. Arosin Co., 414 Robert StreetSt. Paul, Minn.
Oscar P. Gustafson Co., 410 Nicollet Avenue...Minneapolis, Minn.
Pomerleau & Son, 227 East Hennepin Avenue...Minneapolis, Minn.
Lindman's Jewelry, Elk's BuildingBemidji, Minn.
Paul E. TeskeHibbing, Minn.
Geary Jewelry Co.Hibbing, Minn.
Randall's Jewelry & Gift StoreGrand Rapids, Minn.
Weber Jewelry & Music Co.,
714 St. Germain StreetSt. Cloud, Minn.

Name	Location	Car Capacity	Switch Opens	Name	Location	Car Capacity	Switch Opens
First Subdivision				Third Subdivision			
North Central Public Service Spur.	2.25 miles east of Coon Creek Jct.	7	W	Dugdala	0.90 miles east of Tilden Jct.	12	W
Rural Coop. Power Ass'n Spur	2.42 miles east of Cambridge..	6	E	Burwell	7.06 miles west of Benoit	38	E & W
Second Subdivision				Fourth Subdivision			
International Refineries	Alford	45	E	Land O'Lakes Creamery Spur	0.58 miles west of Sebeka	19	W
Lindsay Pit	1.69 miles west of Carlton	70	E	Peters Meat Products Spur	0.40 miles west of Long Prairie	10	W
Flint Pit	2.33 miles east of Brookston	120	E	Redwood Rendering Co	1.61 miles west of Long Prairie	35	E
Mirbat	5.37 miles east of Floodwood	12	E	Midland Co-op. Spur	1.68 miles west of Long Prairie	5	E
Hartley's Spur	6.98 miles west of Floodwood	3	E	Seventh Subdivision			
Wawina	12.90 miles west of Floodwood	11	E	R. E. A. Oil Spur	0.5 miles east of Milaca	3	W
Cohasset Mill & Lumber Co.	0.37 miles east of Cohasset	9	E	Kanabes Hdws. Co. Spur	1.0 miles east of Mora	5	W
Minn. Power and Light Spur	0.98 miles west of Cohasset	106	E	Fourth Subdivision			
Chippewa Wood Processing Spur	0.13 miles east of Deer River	16	W	Coal Spur	2.47 miles east of Buhl	3	E
Webster Lumber Co.	5.28 miles west of Schley	17	E	Service Station Inc. Spur	0.90 miles east of Hibbing	4	E
Farris	4.13 miles west of Cass Lake	15	E & W	Oil Track	1.42 miles east of Hibbing	18	E & W
Airport Spur	2.25 miles west of Bemidji	19	W	Douglas Shop Spur	2.18 miles east of Emmert	9	W
Benoit Pit	3.61 miles west of Benoit	157	W	Wacootah Storage Track	3.67 miles west of Virginia	25	E & W
				Keewatin Saw Mill Spur	1.92 miles west of Kelly Lake	14	E
				Mid-Range Builders Supply	0.15 miles east of Nashwauk	7	W
				Minn. Power & Light Spur	1.09 miles east of Nashwauk	15	E
				Ryan and Gillis Spur	0.93 miles west of Kevin	29	W
				Oil Spur	1.19 miles east of Canisteo	35	W

Mine Spurs

Name	Location	Switch Opens
Stevenson, Lambertson, Mahoning Concentrate, Warren	0.53 miles east of Kelly Lake	W
Mahoning, Smith, N. Uno, Mahoning Grp IV, So. Agnew, Carmi	0.72 miles east of Kelly Lake	W
Hull Crusher	1.30 miles east of Kelly Lake	W
Morton	1.98 miles east of Kelly Lake	E
No. Agnew	2.22 miles east of Kelly Lake	W
Scranton, Alworth	2.42 miles west of North Mitchell	W
Susquehanna, Weggum, Boeing	0.03 miles west of North Mitchell	E
Webb, Albany, Longyear, Bradford	0.81 miles east of North Mitchell	E
Dunwoody	0.99 miles east of Emmert	E
Chataco	0.74 miles west of Chisholm	W
Elbern	2.87 miles west of Buhl	W
Judson, Michael	1.35 miles west of Buhl	W
Grant	1.22 miles west of Buhl	W
North Shiras	0.78 miles east of Buhl	E
Margaret	0.96 miles east of Buhl	E
Wanless	1.38 miles east of Buhl	E
Kinney, Atkins, Wade	0.68 miles east of Dormer Jct.	E
Elliott Siding	1.18 miles east of Dormer Jct.	E & W
Hanna B, Pilot	2.64 miles west of Virginia	E
Enterprise	0.83 miles west of Virginia	E
Columbia	0.47 miles west of Virginia	W
Bennett-Russell, Carls	2.57 miles west of Kelly Lake	E
St. Paul	0.25 miles east of Keewatin	E
Sargent Shaft, Sargent Open Pit, St. Paul Washer	0.34 miles east of Moore	E
Chieftan	0.35 miles west of Moore	W
Mesabi Chief Washer, Aromac, Perry, Mississippi	1.17 miles west of Moore	W
O'Brien	1.57 miles east of Nashwauk	W
Hawkins Fines	0.37 miles east of Nashwauk	E
York, Galbraith	0.15 miles east of Nashwauk	W
Hawkins (MacKilican)	0.13 miles east of Nashwauk	E
Harrison	0.78 miles west of Nashwauk	W
Patrick C, Kevin-Patrik, Patrik Fines	2.26 miles west of Nashwauk	W
Majorca, Draper Annex, Barbara	0.73 miles east of Calumet	W
Hill Annex Washer	0.60 miles east of Calumet	E
Hill Annex Fines, Hill Trumbull Washer	0.69 miles east of Calumet	E
Hill Spur	0.37 miles west of Calumet	E
Rhude Media Spur	0.57 miles east of Holman Jet	E
Arcturas	0.25 miles east of Holman Jet	W
Holman	Taconite Jet	W
Holman Lean Ore	1.82 miles east of Bovey	E
Hunner	0.83 miles west of Bovey	E
Canisteo, Buckeye, Danube	Canisteo	E & W
West Hill	0.20 miles west of Canisteo	E
Jessie	1.60 miles west of Canisteo	W
Greenway	2.42 miles west of Canisteo	W
Tioga	0.24 miles east of Seyton	W

SPEED TABLE

Time Min.	Per Mile Miles		Time Min.	Per Mile Miles	
	Sec.	Per Hour		Sec.	Per Hour
			1	12	50.0
			1	14	43.6
			1	16	47.4
			1	18	46.3
			1	20	45.0
			1	22	43.9
		46	1	24	42.9
		47	1	26	41.9
		48	1	28	40.9
		49	1	30	40.0
		50	1	32	38.7
		51	1	36	37.5
		52	1	39	36.4
		53	1	42	35.3
		54	1	45	34.3
		55	1	50	32.7
		56	1	55	31.3
		57	2	—	30.0
		58	2	10	27.7
		59	2	20	25.7
1	0	60.0	2	30	24.0
1	1	59.0	2	40	22.5
1	2	58.1	3	—	20.0
1	3	57.1	3	30	17.1
1	4	56.3	4	—	15.0
1	5	55.4	5	—	13.0
1	6	54.5	6	—	10.0
1	7	53.7	7	—	8.6
1	8	52.9	8	—	7.5
1	9	52.2	9	—	6.7
1	10	51.4	10	—	6.0

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