GREAT NORTHERN RAILWAY

MESABI DIVISION

Special Instructions No. 1

EFFECTIVE 12:01 A. M.
CENTRAL TIME

Sunday, March 1, 1942.

Employes whose duties are in any way affected must have a copy of Current Special Instructions with them while on duty to be used in conjunction with Current Time Table.

F. D. KELSEY, Superintendent.
C. McDONOUGH, General Manager.
J. B. SMITH, General Superintendent Transportation.

FIRST SUBDIVISION

(Main Line)

1. **Maximum Speed for Trains.**

Between	Passenger	Freight
Duluth and Bridge Switch	25 MPH	15 MPH
Superior and Coon Creek Jct.	75 MPH	50 MPH
Except between Boylston and Foxboro	55 MPH	40 MPH

2. **Speed Restrictions.**

Duluth Terminal Bridge,
Passenger Trains ..... 25 MPH
Freight Trains ..... 15 MPH
H-5 ..... 20 MPH
Heavier than H-5 prohibited.
Through reverse curve opposite Cleveland Cliffs Dock, Duluth ..... 10 MPH
Bridge 14.2 Boylston, Passenger Trains ..... 35 MPH
M, N. O. P. Q. R. S ..... 10 MPH
Bridge 20.0 Dedham, R ..... 20 MPH
Bridge 20.2 Dedham, R ..... 20 MPH
Bridge 22.1 Foxboro, R ..... 20 MPH
Bridge 45.9 Kerrick, R. ..... 20 MPH
Bridge 62.4 Sandstone, M, O-6, O-7, O-8, Q-2, S-2 ..... 20 MPH
N, Q-1, S-1 ..... 10 MPH
R ..... 5 MPH

3. **Engine Restrictions on Industry Tracks.**

Engines larger than O-3 Class not permitted on industry tracks at Dedham, Foxboro, Holyoke, Nickerson, Duquette, Kerrick, Hinckley, Brook Park, Henriette and Andover.

4. **Restricted Clearances.**

Superior—Bents under Fifteenth Street Viaduct will not clear a man on side of car.

5. Extra trains will use double track in direction of current of traffic between 25th St. Superior and Boylston without orders or clearance. Second class trains will proceed in same manner from 25th St., Superior, to Central Ave. Tower, where will receive orders or clearance.

6. **All trains will register by ticket at Central Ave. Tower, Boylston, Brook Park and Coon Creek Jct.**

7. Trains or engines using siding at Brook Park will be governed by Automatic Block Signal and Interlocking Rules. Trains or engines shall not enter this siding through cross-over unless authorized by train order. Transportation Rule 105 is modified to permit maximum speed of 45 MPH for passengers and 30 MPH for freights when track is seen or known to be clear.

8. Normal position of switch east end Saunders Yard shows green for clear route from Track No. 1 to Allouez.

SECOND SUBDIVISION

(Milaca Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Brook Park Jct. and East St. Cloud	45 MPH	30 MPH

2. **Speed Restrictions.**

Bridge 60 Ogilvie, O-6, O-7, O-8, Q-2, S-2 ..... 20 MPH
M, N, Q-1, S-1 ..... 10 MPH
R ..... 5 MPH
Bridge 69 Mora, R ..... 20 MPH
Bridge 77 Quamba, R ..... 20 MPH
Between Home Signals of Interlockings at ..... 20 MPH
Brook Park Jct.
East St. Cloud, N. P. Ry. Crossing.

3. **Engine Restrictions On Industry Tracks.**

Engines larger than O-3 Class not permitted on industry tracks, also house track Mora and mill spur Foley.

4. Register at Milaca for trains originating and terminating at this station.

5. Between St. Cloud and East St. Cloud trains will be operated as follows:

Eastward trains require clearance.

Westward trains from East Side Line will be governed by semaphore at N. P. Ry. Jct.

Westward trains on Second Subdivision will be governed by semaphore at East St. Cloud.

Operator East St. Cloud will get authority from Operator St. Cloud before clearing semaphore for westward trains.

Normal position east lead Spring Switch Fifth Ave. St. Cloud, is for Yard Lead.

THIRD SUBDIVISION

(Main Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Boylston and Cloquet	50 MPH	40 MPH
Cloquet and Cass Lake	60 MPH	45 MPH

2. **Speed Restrictions.**

Bridge 62 Floodwood, R ..... 20 MPH
Main St. Crossing, Deer River ..... 15 MPH
Between Home Signals of Interlockings at ..... 20 MPH
Bridge 6 westward only.
Carlton, East Siding Switch and Crossover westward only.
Gunn.
Schley, M. St. P. & S. S. M. Ry. Crossing.

At Cass Lake, trains and switch movements will not exceed 8 MPH on all tracks over footwalk crossing located just east of of the coal chute, and warning sounded as prescribed for public crossings. Between the hours of 8:00 AM and 5:00 PM crossing must be cut immediately. Engines will not be blown down within 100 feet of this footwalk.

3. **All trains will register by ticket at Boylston.**

4. Double track Boylston to Swan River, except over Gauntlet at Bridge 6, MP 29, which is governed by interlocking signals.

5. The end of double track at Swan River is at the east crossover located just west of Block Signal 91.2. The normal position of east crossover switches are:

East Switch: For through movement of Eastward trains from siding to Eastward main track.

West Switch: For through movement of Westward trains.

The side track between the west switch and east crossover will be known as Eastward siding and is to be used by Eastward trains only. The normal position of west switch is for siding and all Eastward Third Subdivision trains will enter siding at the west switch. Transportation Rule 105 is modified to permit authorized speed on that subdivision through siding for Eastward trains only. Trains occupying siding will protect against Eastward trains as prescribed by Rule 99. Westward trains must not use this siding unless authorized by train order and when authorized will be governed by Rule 105, also protecting against Eastward trains. Eastward Third Subdivision trains will not use the main track between the west switch and end of double track unless authorized by train order or in case of emergency and then under flag protection.

6. A dragging equipment detector connected with block signal system is located at Signal 33.2 on Eastward track about one and three-fourths miles east of Carlton. An eastward train receiving a stop indication at Signal 30.2 must make a thorough inspection of train for dragging equipment before proceeding.
7. Cloquet—Derails located near east end of Storage tracks Nos. 1 and 2 are not provided with standard derail signs.
8. Daily except Saturday, eastward freight trains will set out at Deer River all cars destined Grand Rapids other than perishable and rush cars. When setting out cars at Grand Rapids, eastward freight trains will stop and leave train west of west switch; westward trains will stop east of the first crossing.

FOURTH SUBDIVISION

(Main Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Cass Lake and Crookston Yard	60 MPH	45 MPH

2. **Speed Restrictions.**
   Between Home Signals of Interlockings at ..... 20 MPH
   Bemidji, N. P. Ry. Crossing.
   Erskine, M. St. P. & S. S. M. Ry. Crossing.
   Tilden Jct., N. P. Ry. Crossing.
   Crookston Yard, N. P. Ry. Crossing.
3. **Engine Restrictions on Industry Tracks.**
   Engines larger than O-3 Class not permitted on industry tracks, or on interchange track at Erskine.
4. Register at Bemidji, Tilden Jct., and Crookston Yard only for trains originating and terminating at those stations, except Nos. 35 and 36 will register at Tilden Jct.

FIFTH SUBDIVISION

(Park Rapids Line)

1. **Maximum 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., N. P. Ry. Crossing.
   Wadena, N. P. Ry. Crossing.
3. Normal position wye switch at Cass Lake is for west leg of wye.

SIXTH SUBDIVISION

(Princeton Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Elk River and Milaca Jct.	25 MPH	25 MPH

2. **Speed Restrictions.**
   Between Home Signals, Elk River, N. P. Ry. Jct..... 20 MPH

SEVENTH SUBDIVISION

(Allouez Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Saunders and Allouez	20 MPH	20 MPH

2. Double track extends from Allouez to Bridge A-8.
   Extra trains will use double track in direction of current of traffic between Allouez and east end of Bridge A-8 and single track east end of Bridge A-8 to Saunders under yard limit rule without orders or clearance.

EIGHTH SUBDIVISION

(Casco Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Brookston and Kelly Lake	40 MPH	30 MPH

NINTH SUBDIVISION

(Chisholm Line)

1. Blank.

TENTH SUBDIVISION

(Swan River Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Swan River and Virginia	45 MPH	35 MPH

2. **Speed Restrictions.**
   Between Home Signals of Interlockings at ..... 20 MPH
   Scranton Mine Crossing.
   Emmert Tower.
   Virginia, D. W. & P. Ry. Crossing, M. P. 74.
   Virginia, D. W. & P. Ry. Crossing, Cresent Ave.
   Hibbing—Over all highway crossings between switches 15 MPH and switch movements will be protected by a trainman on the ground at the crossing.
   Virginia—Trains and engines must stop at U. S. Highway No. 53, and trainman will flag movement over crossing.
3. Rules governing the operation of double track between Kelly Lake and Emmert Tower:
   Trains or engines moving in this territory must keep to the left unless otherwise provided.
   Trains or engines will run with current of traffic between Kelly Lake and Emmert Tower without orders or clearance.

ELEVENTH SUBDIVISION

(Gunn Line)

1. **Maximum Speed For Trains.**

Between	Passenger	Freight
Kelly Lake and Gunn	45 MPH	35 MPH

2. **Speed Restrictions.**
   Between Home Signals, Gunn ..... 20 MPH
3. Great Northern trains will stop at DM&IR crossing, Majorca Spur, just east of Calumet and trainmen will protect against DM&IR trains while making movement over crossing.

ALL SUBDIVISIONS

1. **Maximum Speed For Engines.**

Steam	
F-8, G-3	40 MPH
N, Q-1, R	45 MPH
O-5, Q-2	50 MPH
O-1, O-3, O-4, O-6, O-7, O-8	55 MPH
S-1	60 MPH
H-4, H-5, H-6, H-7, P-2, S-2	65 MPH
Oil and Gas Electric	
5200-5201	35 MPH
5300-5301	40 MPH
5101 to 5105, 5302 to 5333, 5600, 5900-5901	45 MPH
5400 to 5404	75 MPH
5700-5701	85 MPH
2300 to 2324	50 MPH
2325 to 2341	70 MPH
Diesel-electric passenger engines light	60 MPH
All engines backing up	20 MPH

2. **Speed Restrictions.**
   When freight cars are moved in passenger trains the maximum speed of the train shall not exceed speed authorized for freight trains, except trains Nos. 105 and 106 between Park Rapids Jct. and K Line Jct. may run 35 MPH.
   All trains except first class will approach mining spurs on the Range at restricted speed.
   Trains handling steam derricks, pile drivers, cranes, ditchers, steam shovels, dozers, etc. ..... 25 MPH
   except Park Rapids Line and Princeton Line ..... 15 MPH
   and booms, if attached to machines, must be in trailing position.
   Trains handling ore cars or air dump cars loaded with gravel ..... 30 MPH

branch lines ..... 20 MPH
Loaded ore trains ..... 30 MPH
Engines and trains over drawbridges ..... 15 MPH
Engines and trains through No. 20 turnouts at Coon Creek, Brook Park, Swan River, Boylston, Saunders ..... 45 MPH
through all other turnouts ..... 15 MPH

Movement of dead engines in trains.

Steam engines with side rods on both sides ..... 40 MPH
Steam engines without side rods ..... 10 MPH
Gas-electric 2300-2324 inclusive ..... 50 MPH
Gas-electric 2325-2339 inclusive ..... 60 MPH
Oil-electric 2340-2341 ..... 60 MPH
Diesel-electric switch engines ..... 40 MPH
Diesel-electric freight engines ..... 45 MPH
Diesel-electric passenger engines ..... 75 MPH

Place class "O" and larger engines not to exceed 15 cars behind road engine, class F-8 and smaller engines next ahead of caboose.

Not less than 5 cars between all engines.

Gas and oil-electric motors must be handled on rear of train.

3. **Clearance Provisions and Exceptions, Rule 83(B).**

(1). Boylston, Brook Park Jct., North Mitchell, Ruby Jct. Trains for which these points are initial stations may proceed on authority of clearance under which such train arrives, and at Boylston only when train order signal indicates proceed.

(2). 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.

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

(4). Mesabi Division clearance received at Crookston will clear train at Crookston Yard.

(5). Mesabi Division clearance received at Elk River will clear train at N. P. Ry. Jct.

(6). At Milaca Jct., clearance under which Nos. 305 and 315 arrive will clear Nos. 316 and 306, respectively, at that point.

(7). At K Line Jct., clearance under which Nos. 105 and 107 arrive will clear Nos. 108 and 106, respectively, at that point.

4. **Following transportation rules in the Consolidated Code, effective April 1, 1939, are amended, modified or supplemented as follows:**

Definitions: "Two or More Tracks" amended: Term "Double Track" to be continued in Time Table and Train Orders.

Rule M: Supplemented:

(a). Paragraph 4: Modified: Employes may step up on footboard of an approaching engine when standing outside of rail, but will not get on or off between rails.

(b). Not more than one employee will ride on leading footboard of engine, then outside of rail, preferably on engineer's side.

(c). Employes are prohibited from riding on pilot or pilot beam of engine, or on footboard between engine and cars when cars are being pulled, shoved, switched, or while coupling is being made.

(d). When adjustment is necessary to drawbar, knuckle pin, or locking block, prior to making coupling, or when coupling fails, engines or cars must be separated not less than 10 feet and action taken to prevent movement before going between cars.

(e). Where helper engine is used behind caboose helping train, helper pilot will ride engine, and engine will be uncoupled by trainman from caboose platform.

(f). Employes are forbidden to stand with feet resting upon car trucks, truck frame, or oil box while car is in motion.

(g). Riding on end of cars containing lading which may shift is prohibited.

(h). Trainmen or other employes, when carrying baggage or other articles, except brake club and lantern, are prohibited from climbing up or walking over top of trains.

Rule 2: Second sentence modified: The certificate in prescribed form must be renewed and filed with the Watch Inspector during the month of August each year.

Rule 2(A): Modified: "At monthly intervals" instead of "At semi-monthly intervals."

Watch comparison should be made as nearly as possible at 30 day intervals.

Rule 5: Paragraph 5 amended: In Time Table train numbers in small figures adjoining will not be shown at scheduled meeting or passing stations.

Rule 8(A): Modified: Electric lanterns displaying yellow light approved for use of switch tenders.

Rule 26: Supplemented: Switches at repair tracks will be locked with private lock, in addition to the blue signal protection, and lock may be removed only by the foreman in charge of repair track.

Rule 27: Supplemented: Lights will be displayed at night on all main line train order signals. On branch lines where lights are not used in train order signals at night, trains will positively ascertain position of signal before passing.

Lamps on main line switches in Automatic Block Signal territory, and on branch lines where no night service is performed, have been discontinued, except at authorized locations.

Rule 91: Supplemented: On tracks where no block signals are in service and on double track movements against the current of traffic, the train order signal will be used by operators, during their assigned hours, for spacing trains 10 minutes apart after train has passed the train order signal 300 feet.

Rule 95 & S-96 & Train Order Form F (For sections): When signals are displayed to an intermediate register station of a schedule, the first section will display the signals to the regular stop of the train at that station, whether it be on the main track or some other track; following sections must clear the main track at the entrance switch of the siding at that station unless otherwise directed by train order or unless Rule 93 permits them to use the main track. When signals are displayed to the terminal of schedule on a sub-division, all the sections have the same right as the regular train has when no signals are displayed.

Rule D-97: When a clearance is used authorizing an extra train to move with current of traffic, the point to which this movement is authorized must be endorsed on the clearance in the form, To .....filling in the name of the station in addition to the number of the clearance. The authority for train movements will thus be restricted to the point named without necessity of cancelling the clearance in each case.

Rule 99: Supplemented: When a passenger train stops the flagman must immediately appear on the ground at the rear of rear car with necessary flagging equipment and properly clad, prepared to remain out for an indefinite time without having to return to the train for any purpose.

Rule 206: Supplemented: Engine numbers of regular trains will be shown in train orders. In transmitting and repeating train orders by telephone, numerals one to nine inclusive and fractions, as well as the station and time in the body of an order will be first plainly pronounced and then spelled letter by letter, thus: Aurora, A-u-r-o-r-a and one naught five—o-n-e n-a-u-g-h-t f-i-v-e. Other numerals above nine will first be plainly pronounced, and then each figure separately pronounced, thus: ten, one-naught; four hundred one, four-naught-one; twenty one eighty five, two-one-eight-five.

Rule 509-B: Supplemented: When a train is proceeding through a block on a stop and proceed indication, all facing point switches shall be examined before passing over them. When stopped by a stop and proceed indication at the leaving end of a siding, enginemen and trainmen should understand that such signal indication may be due to an opposing train proceeding into the same block at the opposite end under an approach signal indication, Rule 501 (B), and before proceeding into the block every precaution, consistent with running orders, and the nature of the track ahead, should be taken to insure safe movement through the block.

Rule 728 and Maintenance of Way Rule 28: Supplemented: In double track territory, the red flag or red light will be placed between the rails of obstructed track, instead of between tracks.

Rule 812: Supplemented: Running inspection should also include frequent inspection of the track behind the caboose. If any fresh marks are noticed train should be stopped immediately and train dispatcher notified so slow order can be issued for information of other trains to avoid unnecessary stopping of trains.

5. The following Consolidated Code of Transportation Rules and definitions, do not apply to Great Northern or Northern Pacific employes, unless they work in joint territory where such rules are in effect.

10f	251-264 incl.	Manual Block
14 t, u, v. w.	300-373 (A) incl.	system
210	501 F	Block Stations
217	606 a, b, c, d.	Cab signals
225	636	

6. Double heading trains is prohibited, except as authorized by Superintendent.

7. Cars will not be pushed by engines between stations, except:
(a). To switch spur tracks between stations, cars then to be moved to first available switch where they will be run around. When making such a move, trainman or yardman must take a conspicuous place on the lead car, and speed be restricted to 10 MPH.
(b). Steam derricks, snow, track and bridge equipment may be so handled when absolutely necessary to maintain satisfactory train operation.

8. After severe blizzard or dirt storm, employes on first train over road must exercise care to avoid accident caused by striking drifts without first having drifts faced with hand shovels, cutting in far enough to get beyond the hard snow and giving a perpendicular wall to strike against instead of slope or wedge-like shape.

9. When operating snow dozer, flanger will be operated by competent employe, and conductor in charge will ride in the dozer.

10. 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.

11. 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.

12. If a car handled on rear of train has coupler pulled out, draft gear housing should be removed if possible. When that cannot be done trainmen must know that housing is securely fastened to prevent further accidents in transit.

13. When a train strikes livestock bring train to a stop and make prompt inspection to ascertain if any damage to equipment. If livestock is struck by trains near switches, the switches should be examined, dispatcher notified, and sectionmen called so permanent repairs can be made.

14. When a main track switch is run through trainman must, in addition to spiking it, notify dispatcher and call sectionman so that permanent repairs can be made.

15. When main track is out of service between siding switches and trains must be run through siding, dispatcher will be notified immediately, and switches will be set for siding. In non-block signal territory, flagmen will be provided beyond switches in addition to other protection.

16. 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.

17. When placing cars on delivery tracks at elevators, warehouses, platforms, or where material of any kind is piled close to the tracks above the height of the sill steps, trainmen and yardmen must not ride the sides of the cars next to such obstructions while cars are in motion. Work should be carried on from either the tops of the cars, when conditions permit, or on the opposite side of the track from such obstructions.

18. Trainmen will closely observe lading of open top cars in transit, and if found shifting, see that it is properly adjusted or car set out.

19. Loaded dump cars should not be handled on double track after dark, but if necessary to do so, close watch must be kept by trainmen and if a car dumps its load, train must be stopped and protection afforded on the opposite track.

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

21. Where Automatic Highway crossing signals are in service, every effort will be made to avoid unnecessary operation of these signals and delay to highway traffic. Manual control is provided where conditions require, and instructions for its use are posted in box attached to instrument case at crossing.

22. Conductors will see that multiple sheet metal protectors are returned to equipment box on baggage cars when extra journal bearings are used.

23. Conductors will report by wire all flat spots on wheels of passenger cars. Any cars having flat spots on wheels of more than two and one-half inches long must be set out.

24. Conductors of stock trains will see that coaches occupied by stock attendants are properly heated and kept comfortable while in their charge.

25. U. S. Postal Mail Clerks must be notified by conductors when trains are operated against the current of traffic on double track or through sidings.

26. Conductor will make prompt wire report to Superintendent and General Foreman of Passenger Equipment, St. Paul, when air hose is removed from sealed box marked "Emergency Air Hose" found over Jennings Drive on passenger cars having truck mounted brakes, and when spare belt is removed from air-conditioned cars.

27. Account necessity of heating road oil to permit faster flowing such cars will not be spotted in the immediate vicinity of any building due to fire hazard.

28. Baggage cars returned deadhead when moved in storage mail service in opposite direction will be accompanied by waybill carrying notation "Deadhead mail car, no material of any character other than U. S. Mail or mail sacks to be loaded in it." Conductors will be held responsible for compliance of waybill instructions.

29. Handling of Explosives, Inflammable and Corrosive Liquids. Cars placarded explosives moving in through freight trains must be handled not less than 16th car from road engine, one car from helper engine, and 11 cars from caboose. These cars may be handled second car from engine or caboose in local trains. These cars must not be placed in train next to loaded tank cars, flat or gondola cars loaded with pipe, lumber, poles, iron, steel, or refrigerator cars equipped with gas burning heaters, stoves or lanterns, or next to box cars bearing inflammable or corrosive liquids. Cars containing explosives must have air and hand brakes in operative condition, and must not be cut off while in motion.
Placarded loaded tank cars must not be placed in train next to cars containing lighted heaters, stoves, lanterns or gas burning type refrigerators, or next to flat or gondola cars loaded with logs, lumber, rails, pipe or anything that is liable to shift, and cars must not be handled less than 6th car from engine or caboose when possible to do so. Loaded tank cars must not be cut off in motion until all preceding cars have cleared route, and in turn cleared, before any cars are allowed to follow.
Further details covering handling of Explosives, Inflammable and Corrosive Liquids may be found in I.C.C. Regulations.

30. The use of open flame lights, burning oil lanterns, and smoking, prohibited when handling gasoline or other flammable oils, and in or around the operating cab of gas-electric motors.

31. Delivery of gasoline or other flammable oils must not be made after dark.

32. Gas-electric motors must not be fueled while occupied by passengers, or coupled to cars occupied by passengers.

33. When engine is being spotted for purpose of taking fuel or water, or leaving there, it will not be moved until it is positively known that employes are located where they will not be injured. To prevent ice forming during cold weather, be careful to avoid overflowing of engine tank.

34. Employes must not go out on exterior of cab or use running board, nor hang from gangway or steps of a moving engine. On standing engines the narrow ledge along the bottom of cab must not be used. In climbing down from cabs, employees must face towards engine.

35. Snow or ice should not be allowed to accumulate on footboards.

36. Employees who are authorized to move engines at shops and roundhouses, either on inside or outside tracks, must, by inspection, know before moving engine that it is in condition to be moved, and be positive that no one is working underneath or around it that is liable to be injured. When necessary to work under engine on outside tracks another employe will stand watch to prevent engine being moved.

37. Fire builders must see that reverse lever is in center of quadrant with throttle closed and cylinder cocks open before starting fire to generate steam in boiler.

38. No person will move the reverse lever of an engine without first knowing that no one is working around links or other parts who might be injured thereby.

39. When changing brake shoes on engines or doing work about them that might cause injury due to unexpected application, employes must know that air brakes are cut out and inoperative.

40. On engines equipped with bridge sprinklers, enginemen must use sprinklers (except during freezing weather) when passing over bridges, station platforms, and when pulling away from stations where ashes have been dumped. Trainmen should observe whether or not sprinklers are working and report failures to enginemen.

41. The hole in fire box door of oil burning engines will be closed except when being used for sanding purposes.

42. Employes who desire to wear colored glasses while on duty are obliged to purchase them from Company Storekeeper.

43. **Operation of Spring Switches.**

Spring switches of two different types are in use on this division:

Without facing point lock.

(a) West switch, Eleventh Subdivision, Kelly Lake wye. Normal position is for Eleventh Subdivision.

With facing point lock.

(a) Switch at west end of Eastward Siding, Swan River. Normal position is for Eastward Siding.

(b) Switch at east end of Nickerson Siding. Normal position is for main track.

(c) Switch at west end of Nickerson Siding. Normal position is for main track.

Train or engine movements may be made through these switches in a trailing point direction without operating the switch stand.

The normal position of a spring switch without facing point lock is identified by a triangular yellow target on switch stand with letter "S" in black, and "lunar white" light in switch lamp in place of green light displayed in both directions along the main track.

The normal position of a spring switch with facing point lock, located within automatic block signal territory, is identified by a color light type signal, displaying "lunar white" light to trains moving in a trailing direction through or over the switch.

The normal position of a spring switch with facing point lock, located outside of automatic block signal territory, is identified by a color light type signal, displaying "lunar white" light to trains moving in either direction over the switch.

Train or engine movements over the switch will be governed by color light type signals, located at the switch, displaying a "lunar white" light to designate a "spring switch in normal operating condition", and "red" for "stop and proceed", or by automatic signal indication, or by both.

The speed of a train running through a spring switch shall not exceed 15 MPH until the leading truck has passed through the switch, when normal speed may be resumed.

The speed of a train moving over a spring switch in a facing point direction shall not exceed 15 MPH unless the switch is equipped with a facing point lock.

When part of a train or engine has run through the spring switch, no movement shall be made in the opposite direction until the switch has been thrown to the reversed position by means of the switch stand, to back up the train before switch has been thrown will cause a derailment.

When a train or engine moving in either direction, not through the switch, is stopped by a stop and proceed signal at the spring switch, it may proceed after making certain that the switch is properly set for such movement.

When a train or engine moving in the direction to run through the switch is stopped by a stop and proceed signal at the spring switch, it may proceed after throwing the switch by hand and making certain that it is properly set for such movement. Switch shall be returned to its normal position after train movement through it has been completed.

44. All employes concerned have been provided with a Book of Rules and Regulations Governing the Care and Operation of Air Brake and Air Signal Equipment effective January 1, 1936. Current Consolidated Code of Transortation Rules 814 to 818 inclusive do not supersede these instructions, but are supplementary thereto. Air Brake book of instructions gives reference to certain bulletins issued by the Superintendent. In that connection be governed by the following:

At Repair Point Terminals:

Duluth, Superior and Kelly Lake car inspectors are employed and will handle the inspection and testing of air brake as well as signal equipment on passenger and freight trains in the manner prescribed in the above mentioned book of rules. They will be held responsible for and see that all hand and air brakes are fully released before the train is permitted to leave the terminal. This does not relieve trainmen from knowing that all brakes are released.

Trains leaving these stations must have the air brakes on all cars in effective operating condition, viz: 100%.

On incoming freight trains the terminal brake test will be made as prescribed in Rule 47.

At all Other Terminals:

At terminals or points where trains, transfer, or special switch movement specified below, originate, or where engine, or engine crew, or train crew change on train, the inspection of air brakes must be done by the train or yard crew and the engine crew, as prescribed in Rule 42. The train will not be allowed to leave such points with less than a continuous 85% of the cars behind the engine with operative air brakes. If any car is found with inoperative brakes, such car or cars must be switched to the rear of train and defect card, Form 1127, attached to such car in a conspicuous place, as prescribed in Rule 56 and Transportation Rule 815. Conductors and yard foremen will be held responsible for the observance of these instructions.

Transfer or special switch movements, between Duluth and Superior; Allouez, Superior and Saunders; and Range Transfers, will have air brakes coupled and connected with the engine and air brakes will be tested in the prescribed manner.

At Other Points Enroute the following will apply:

Where one or more cars are added to a train, the cars picked up, when placed in position where they are to be handled in trains, must be tested, as prescribed in Rule 42.

Where cars are discovered with defective air brakes, it is permissible to move them to the nearest repair point, providing that 85% of the remaining cars in train are subject to air brake control from the engine.

Retaining Valve Test:

All loaded ore trains leaving Kelly Lake, Nashwauk, Calumet, Gunn and any other point where ore trains may originate on the Range, will have retainers turned up on the 40 head cars of train and kept turned up entire trip into Allouez Yard.

At points where car inspectors are on duty they will make retaining valve test, as prescribed in the rules and know they are releasing properly when the terminal yard test is made. Where car inspectors are not on duty, retainers will be turned up by trainmen and conductors will be held responsible to see that test is conducted in the prescribed manner.

Engineers, after terminal test of air has been made, and brakes released, will wait 5 minutes before they attempt to start train so as to be sure all cars in the train are released.

45. Operation of Interlockings.

Trains moving against the current of traffic on double track through interlockings, or where governed by dwarf signals, shall not exceed 15 MPH. Conditions may require a further speed restriction.

Whistle Signals for Routes at Junctions and Interlockings.

Routes	Whistles
Straight away	Two short, one long.
Diverging line	Two long.
Siding	Four short.
Against current of traffic	One long, one short.

Automatic Interlockings.

Bridge 6 .....MP 29 Third Sub-Div. Gauntlet.
Schley .....2.04 Mi. West of—MStP&SSM Ry.
Wadena .....0.23 Mi. West of—N. P. Ry.
Crookston Yard .....2.37 Mi. East of—N. P. Ry.
Park Rapids Jct. .....0.52 Mi. West of—N. P. Ry.

Standard interlocking Rule 672, supplemented by the following, shall govern in the use of automatic interlockings. Additional instructions as required will be posted in "Release" boxes.

If smashboards or semaphore type signals are not in use, trainman, before giving hand signals in accordance with Rule 672, shall place a burning red fusee at each home signal on conflicting routes.

If smashboards or semaphore type signals are in use and may be plainly seen to be in their "Normal" position (set against train movements on conflicting routes), the placing of fusees will not be required.

When necessary to operate smashboard mechanism by hand, crank for this purpose is located in "Release" box. Crank must be inserted in shaft on back of smashboard mechanism, after opening small cover locked with standard switch lock. Crank should be turned slowly and uniformly until movement has completed its entire stroke and smashboard has been moved to its "Reverse" position. When operation is completed, small cover must be locked and crank returned to the "Release" box.

Bridge 6.

"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 smashboard mechanisms are attached by chains to the mechanisms.
If train moving against regular current of traffic is stopped by a dwarf home signal, trainman will operate release located in release box nearest the dwarf home signal, and if signal does not indicate proceed when release returns to normal position, trainman may flag train through gauntlet making certain that smashboard at opposite end of gauntlet is in the reverse position.

Semi-Automatic Interlocking.

Elk River .....0.74 Mi. West of—N. P. Ry.

Train movements from westward main track to G. N. Princeton Line train will stop at westward home signal. Trainman will operate electric switch lock and reverse the switch and derail by throwing lever of junction ground throw switch machine. Bottom arm of westward home signal should then clear.

Train movements from G. N. Princeton Line to eastward main track train will stop at G. N. home signal. Trainman will push button of both eastward and westward switch indicators and if both indicators show clear he may operate electric switch locks and reverse junction and crossover switches by throwing levers of ground throw switch machines. The top arm of eastward G. N. home signal should then clear.

Other train movements over crossover, train will stop at dwarf signal for route desired. Trainman will push button of switch indicator for track to which move is to be made. If indicator shows clear he may then operate the electric switch lock and reverse crossover by throwing lever of ground throw switch machine. The dwarf signal for route should then clear. Open

bottom door of iron box marked Electric Lock and push the Push Button. If lock indicator shows clear switch may be unlocked by turning handle to left. Handle must be returned to normal position before door can be locked. If indicator does not show clear when button is pushed and no conflicting train movement is evident electric switch lock may be released by operating time release.

Open top door or iron box marked "Release" and turn knob of release to right until stops. Hold 3 seconds and then release. The clockwork will return to normal position in two minutes which should release electric lock as shown by indicator.

Attached by a chain to smashboard mechanism located near base of mast of main track home signals is a small crank which may be placed over a shaft of operating mechanism after opening small door locked with a switch lock. Turn crank slow to left until smashboard has been moved to clear position, being sure the stroke has been completed. Remove crank and lock door.

All apparatus must be returned to normal position and locked before leaving.

Remote Control Interlockings.

Brook Park .....East and West Siding Switches.
Brook Park Jct.....Junction Switch.
Hinckley Tower.....West Siding Switch.
Sandstone.....East and West Yard Switches.
Bridge A-8.....End of Double Track.
Carlton .....East Siding Switch and Crossover.

Supplementing Rules 628 and 663: At Remote Control Interlockings where it is not practicable for Signalman (Operator) to examine routes and give hand signals, trainmen shall be governed by instructions of the Signalman (Operator), operating switches by hand as required in accordance with instructions posted in the "crank" or "release" boxes at these switches.

46. BUSINESS TRACKS

NAME	LOCATION	Capacity Cars
First Subdivision		
Howe's Spur	1.38 miles east of Henriette	9
Second Subdivision		
Brunson	2.21 miles west of Mora	4
Third Subdivision		
Wingate	3.21 miles east of Carlton	41
Flint	1.77 miles east of Brookston	132
Hartley's Spur	1.02 miles west of Island	8
Page & Hills	1.37 miles west of Schley	11
Webster Lumber Co.	5.26 miles west of Schley	13
Cohasset Mill & Lumber Co.	0.50 miles east of Cohasset	12
Fourth Subdivision		
Thorson's	3.41 miles west of Benoit	7
Fifth Subdivision		
Raboins Spur	2.56 miles west of Wilkinson	9
Rockwood	5.21 miles east of Sebeka	7
Redwood Rendering Co.	1.50 miles west of Long Prairie	35
Tenth Subdivision		
Coal Spur	2.46 miles east of Buhl	3
Parkville Oil Spur	1.50 miles west of Virginia	4
Newcombs Oil Spur	1.00 miles east of Hibbing	4
Eleventh Subdivision		
Kevin Siding	2.07 miles west of Nashwauk	28

47. MINE SPURS

NAME	LOCATION
Stevenson, Warren	0.52 miles east Kelly Lake.
Mahoning, So. Agnew, Smith, Agnew	1.81 miles east Kelly Lake.
Hull Crusher	0.50 miles east Kelly Lake.
Scranton	2.43 miles west North Mitchell.
Susquehanna	0.71 miles west North Mitchell.
Webb, Albany	0.81 miles east North Mitchell.
Dunwoody	1.70 miles east North Mitchell.
Billings	2.05 miles west Buhl.
Grant	1.21 miles west Buhl.
Wabigon	0.25 miles west Buhl.
Harold-South Uno, Dale	1.53 miles east Kelly Lake.
Utica	2.08 miles east Kelly Lake.
Kinney, Helmar	2.94 miles east Buhl.
Wacootah	3.83 miles west Virginia.
Hanna	2.64 miles west Virginia.
Columbia, Commodore	0.47 miles west Virginia.
Bennett Shaft No. 1, Russell	2.73 miles west Kelly Lake.
St. Paul, Bennett, Shaft 2 and 3	0.25 miles east Kewatin.
Sargent, Mesabi Chief, Mississippi St. Paul-washer	0.34 miles east Moore.
Mesabi Chief Washer Aromac	0.50 miles west Moore.
La Rue, Shada, York, Gabraith Argonne	0.16 miles east Nashwauk.
Hawkins	0.37 miles east Nashwauk.
Harrison-Quinn	0.77 miles west Nashwauk.
Kevin-Patrick	2.26 miles west Nashwauk.
Majorca Draper, Barbara	0.73 miles east Calumet.
Hill Annex	0.60 miles east Calumet.
Hill Annex Washer, Hill Trumbull Washer	0.70 miles east Calumet.
Hill	0.36 miles west Calumet.
Danube, Orwell, Judd	0.37 miles east Bovey.
Arcturas	0.25 miles east Holman Jct.
Holman	1.83 miles east Bovey.
Greenway	2.80 miles east Gunn.
Canisteo	1.50 miles west Coleraine.