

NORTHERN PACIFIC RAILWAY COMPANY

St. Paul Division

Special Instructions No. 2

**In Effect at 12:01 A. M. Central
or 90th Meridian Time**

Sunday, April 11, 1937

**These instructions govern Current Time Table.
Read carefully and be positive that you have the
Current Time Table, also copy of Current Special
Instructions.**

**W. C. SLOAN,
General Manager.**

**T. M. FLYNN,
Superintendent.**

**F. R. BARTLES,
Assistant General Manager.**

**P. H. McCAULEY,
General Superintendent of
Transportation.**

SPECIAL INSTRUCTIONS

FIRST SUBDIVISION.

(MAIN LINE)

1. **At Northtown**, switchtender territory extends from Soo Line overhead bridge to three hundred and ten (310) feet east of Thirty-third Avenue N. E. overhead bridge. All trains moving through this territory must receive signal from switchtender before proceeding. Eastward trains moving from eastward main line to Line A are not governed by "Stop Board" located above tracks east of Soo Line overhead bridge. University Avenue Bridge at east end of yard will not clear a man on side of car.
2. **Between Coon Creek and Northtown**, eastward second class and inferior trains may run ahead of Trains 24 and 28 without authority of train orders.
3. **At Coon Creek**, when automatic signal 224 indicates STOP, eastward passenger and light tonnage freight trains will stop, and then proceed at restricted speed to the next signal. Tonnage freight trains will STOP at telephone 1300 feet west of the signal and get information from the towerman as to condition of the block. If telephone is out of order, engine will be cut off and go to tower for definite information.
4. **At Elk River**, all trains from Great Northern Princeton line must get permission from operator before entering First Subdivision. If unable to communicate with operator, train may proceed to the passenger station under protection of flag.
5. **At Clear Lake**, west switch of westward house track is connected with automatic signals, and when not in use must be lined for the house track.
6. **At Gregory and Philbrook**, switch at end of double track is automatic. Normal position is for the westward track. If signals fail to clear, switch must be examined and if not in proper position, first throw "POWER LEVER," then operate switch with the "HAND THROW LEVER." "POWER LEVER" must not be returned to normal position until after the final move over the switch is made. Both levers must be left in normal position and locked.
7. **At Gregory**, switch machine near west switch of crossover operates both switches of crossover between the main tracks. Switch machine near the Old Line switch operates the Old Line switch and derail. Train must be clear of switches and derail before operating switch machines.
8. **Train Order Signals—**
At Coon Creek does not govern trains coming from the G. N. Princeton Line.
9. **Pusher District—**
Between Little Falls and Lincoln.
10. **Bridge and Engine Restrictions—**
Bridge 43, Elk River: Engines classes Z-5 and Z-6 twenty (20) miles per hour on eastward track.
Bridge 105, Mississippi River: Engines classes Z-5 and Z-6 twenty (20) miles per hour.
Class W or heavier engines not permitted on following tracks:
Elk River—Middle and back tracks.
Bailey—Spur on eastward track.
St. Cloud—Jones' spur beyond 200 feet from switch.
Sauk Rapids—Mill track.
Sartell—Mill track.
At Little Falls, freight house platform will not clear class W-3, or heavier engines. Class T and heavier engines not permitted on mill tracks.
At Staples, class W and heavier engines not permitted on track, leading to stationary power plant.
11. **Speed Restrictions—**
Between Northtown and St. Cloud, engines class G. N. O-1, thirty-five (35) miles per hour; G. N. N-2, twenty-five (25) miles per hour.
At Anoka, thirty-five (35) miles per hour from one quarter mile east of passenger station to Ferry Street, the first crossing west of Rum River.
At Elk River, twenty-five (25) miles per hour between two hundred (200) feet west of Oak Street (first crossing east of freight station) and two hundred (200) feet east of Mill Street (first crossing east of passenger station).

At Clear Lake, thirty-five (35) miles per hour through village.
At St. Cloud, ten (10) miles per hour over St. Germaine Street Crossing, just east of freight house and passenger station.
At Sauk Rapids, twenty-five (25) miles per hour between Mile Post 75 and Borup Street, the first crossing west of station.
At Little Falls, ten (10) miles per hour over Broadway, the first crossing east of passenger station.
At Randall, thirty-five (35) miles per hour between second crossing east of station and first crossing west of station.
At Staples, twelve (12) miles per hour over Sixth Street.

12. Register Stations—

Northtown.

Coon Creek for trains from G. N. Ry., Mesabi Division.

Elk River for trains from G. N. Ry., Princeton Line.

Little Falls, for trains originating or terminating, and for trains to and from Third Subdivision.

Staples.

13. Register Exceptions—

At Northtown, first class trains and passenger extras will register by Ticket Form 608, and engineers will not consult register.
At Coon Creek and Elk River, trains from G. N. Mesabi Division and Princeton Line will register by ticket Form 608.

14. Clearance Exceptions—

At Northtown, first class trains will not require clearance if train order signal indicates clear.
At St. Cloud, eastward Great Northern trains will obtain clearance at Great Northern passenger station and be governed by position of interlocking signals at Northern Pacific Junction.
At Coon Creek, eastward Great Northern Mesabi Division trains will not require clearance or orders and will be governed by position of interlocking signals.

15. Commercial Spurs—

	Miles from Northtown	Car Capacity
Bailey	31.2	3
Salida	39.2	5
Graham	88.3	2

16. Lap Siding—Lincoln.

17. Cross-overs—

Northtown, Fridley, Coon Creek, Anoka, Dayton, Elk River, Big Lake, Becker, Clear Lake, Cable, Reformatory, St. Cloud, Sauk Rapids, Sartell, Rice, Royalton, Gregory, Staples.

SECOND SUBDIVISION.

(MAIN LINE)

1. **At Detroit Lakes**, the following engine signals will govern the operation through the interlocking plant, Soo Line Crossing:
For main line, eastward or westward—One long.
On double track, when using reverse track through interlocking limits—Two short and one long.
From main line to diverging route—One long, one short and one long.
From diverging route to main line—One long and one short.
For cross-over between main tracks on double track—Three short and one long.
2. **Pusher District—**
Between Glyndon and Witherow.
3. **Bridge and Engine Restrictions—**
Bridges 155, 187, 249 and 250 westward track:
Engines classes A-2, Z-5 and Z-6 twenty (20) miles per hour.
Bridge 170.1 westward track:
Engines class A-2 twenty (20) miles per hour, engines classes Z-5 and Z-6 ten (10) miles per hour.
At La Belle, the switching lead east of the coal shed at Sand Beach not safe for engines class W or heavier.
At Lake Park, coal dock hopper and west trestle of coal dock not safe for engine.
4. **Speed Restrictions—**
Twenty-five (25) miles per hour through Verndale and Wadena, ten (10) miles per hour through Detroit Lakes.
At Glyndon, passenger trains fifty (50) miles per hour through interlocking plant.
5. **Register Stations—**
Staples.
Dilworth.
Lake Park for trains originating or terminating.
Wadena for trains to and from Fifth Subdivision.

6. **Register Exceptions—**
At Dilworth, through passenger trains will register by ticket Form 608.

Commercial Spurs—	Miles from Staples	Car Capacity
Ice House	60.5	120
Barnes	101.9	20

8. **Crossovers—**
Staples, Aldrich, Verndale, Wadena, Bluffton, Topelius, N. Y. Mills, Richdale, Perham, Luce, Frazee, McHugh, Detroit Lakes, Audubon, Lake Park, Manitoba Jct., Hawley, Muskoda, With-
erow, Glyndon, Dilworth.

THIRD SUBDIVISION.

(BRAINERD LINE)

1. At Little Falls, all trains must protect against First Subdivision trains.
2. At Camp Ripley Junction, gate has been placed over track leading to Camp Ripley, about four hundred (400) feet west of the river bridge. Gate is equipped with switch lock, and must be kept closed and locked when not in use.
Train or engine movements across the joint railway-highway bridge must be made at reduced speed, and movement protected in accordance with Transportation Rule 103.
3. At Camp Ripley, unloading platform along south track does not afford standard clearance from a point two hundred and seventy (270) feet west of gasoline unloading pipe to end.
4. At Brainerd, trains from the St. Paul Division must stop and know route is clear and switches properly set before fouling Lake Superior Division main track.
5. **Pusher District—**
Between Brainerd and 3 miles east.
6. **Bridge and Engine Restrictions—**
Engines classes A-2, Z-5 and Z-6 not permitted.
Bridge 106, Mississippi River:
Engines classes T, Q-3, Q-4, Y, Y-1, Y-2 and Y-3, eight (8) miles per hour.
Double header engines, classes Q, and S-4, eight (8) miles per hour.
Engines classes A, A-1, G-1, G-2, Q-5, Q-6, W, W-1, W-2, W-3, W-4, W-5, Z, Z-1, Z-2, Z-3 and Z-4, may be hauled dead without coal or water at five (5) miles per hour.
Bridge 120, Nokay-Sebei River:
Double header engines, classes Q, Q-1, Q-2, Q-3, Q-4, S-4, S-10 and T, twenty (20) miles per hour.
Engines classes A, A-1, G-1, G-2, Q-5, Q-6, W, W-1, W-2, W-3, W-4, W-5, Z, Z-1, Z-2, Z-3 and Z-4, eight (8) miles per hour.
Class W or heavier engines not permitted on Parker commercial spur or on west end of tracks 13, 14, 15, 16 and 17 at Brainerd.
At Barrows, engine not permitted on spur except on east three hundred (300) feet.
7. **Speed Restrictions—**
At Brainerd, ten (10) miles per hour over Oak Street and twelve (12) miles per hour from east switch to passenger station.
8. **Register Stations—**
Brainerd.
Little Falls.
9. **Commercial Spur—**

	Miles from Brainerd	Car Capacity
Parker	14	4

FOURTH SUBDIVISION.

(LITTLE FALLS AND DAKOTA BRANCH)

1. At Little Falls, all trains must protect against First Subdivision trains.
2. **Bridge and Engine Restrictions—**
Engines classes Q-5, Q-6, W-3 and heavier not permitted.
3. **Speed Restrictions—**
At Grey Eagle, ten (10) miles per hour over grade crossing 950 feet east of station.
At Sauk Centre, fifteen (15) miles per hour through city limits
All steam trains with class T, Q-3 or lighter engines thirty (30) miles per hour.

4. **Register Stations—**
Little Falls.
Morris.

Commercial Spurs—	Miles from Little Falls	Car Capacity
Industrial School	35.1	122
State Agricultural School	86.0	3

FIFTH SUBDIVISION.

(FERGUS FALLS BRANCH)

1. At Fergus Falls, trains must stop not less than twenty-five (25) feet from Great Northern crossing over Rosengren spur, send man ahead and then proceed if way is clear.
2. **Bridge and Engine Restrictions—**
Bridge 74, Bois de Sioux River:
Engines classes W, W-1, W-2 and W-4, eight (8) miles per hour.
Engines classes A, A-1, Q-5, W-3 and heavier not permitted.
3. **Speed Restrictions—**
Ten (10) miles per hour through Wahpeton and over Union Street crossing at Oakes. Engines classes T, Q-3 and lighter in freight service forty-five (45) miles per hour between Wadena and Milnor, thirty (30) miles per hour between Milnor and Oakes. Engines class W thirty (30) miles per hour Wadena to Milnor.
Twelve (12) miles per hour over street crossings, Fergus Falls.
4. **Register Stations—**
Wahpeton.
Wadena.
Oakes.
5. **Register Exceptions—**
At Wadena, enginemen of westward trains will not consult register but will be furnished check of register, Form 602, by the conductor.

Commercial Spurs—	Miles from Wadena	Car Capacity
Hulse	7.0	3
Hoot Lake	49.7	15
Packing House	52.5	3
Ames Pit	59.5	14

SIXTH SUBDIVISION.

(RED RIVER BRANCH)

1. Between Carthage Junction and Fertile, extra trains will run via Sixth Subdivision unless otherwise instructed by train order.
2. **Bridge and Engine Restrictions—**
Engines classes A, A-1, A-2, Z-4, Z-5 and Z-6 not permitted.
Bridge 13, Wild Rice Creek and Bridge 44, Sand Hill Creek:
Engines classes Q-5, Q-6, W, W-1, W-2, W-3, W-4, W-5, Z, Z-1, Z-2 and Z-3, eight (8) miles per hour.
3. **Speed Restrictions—**
Freight trains forty-five (45) miles per hour.
At East Grand Forks, ten (10) miles per hour over Division Street.
At Fertile, restricted speed between west yard limit board and station.
4. **Register Stations—**
Fertile.
East Grand Forks.

Commercial Spurs—	Miles from Manitoba Jct.	Car Capacity
Nada	1.4	8
Crookston Mill	66.4	165
Vannet	80.1	37
Cummings	86.0	12
Sullivan	91.2	20

SEVENTH SUBDIVISION.

(RED RIVER BRANCH)

1. Between Pembina (N. P. Junction, International Boundary) and Emerson Junction, train movements will be made solely on authority of clearance card, Form 1357-A, or Canadian National clearance card, Form 728, issued by telephone block operators at Pembina and Emerson Junction.
2. Bridge and Engine Restrictions—Engines classes A, A-1, A-2, Z-4, Z-5 and Z-6 not permitted.
3. Speed Restrictions—
Freight trains forty-five (45) miles per hour.
At Grand Forks, ten (10) miles per hour over Seventh Avenue crossing.
At Drayton, ten (10) miles per hour over first street crossing east and west of station.
4. Register Stations—
East Grand Forks.
Pembina.

EIGHTH SUBDIVISION.

(RED LAKE FALLS AND SHERACK BRANCHES)

1. At Fertile, all trains, before using Sixth Sub-Division main track, must call operator on telephone, located on pole at west wye switch, and ascertain if any trains are due. If unable to communicate train may proceed under flag protection.
2. At Tilden Junction, towerman on duty 9:00 a. m. to 6:00 p. m. daily except Sunday.
Route will be lined for Great Northern trains, when no towerman on duty.
3. Between Carthage Junction and Fertile, extra trains will run via Sixth subdivision unless otherwise instructed by train order. All N. P. extras running between Carthage Jct. and Fertile will report at Red Lake Falls for orders between 8:00 a. m. and 5:00 p. m.
4. Bridge and Engine Restrictions—
Bridge 70, Red Lake River:
Engines classes S-4, S-10, Q and Q-1, eight (8) miles per hour.
Double header engines class F-1, eight (8) miles per hour.
Engines classes T and heavier not permitted.
5. Speed Restrictions—
Twenty (20) miles per hour between Key West and Sherack, thirty (30) miles per hour over balance of Sub-Division.
6. Register Stations—
G. N. Junction.
Tilden Junction.
Carthage Junction.
Fertile.
7. Register Exceptions—
At G. N. Junction enginemen of eastward trains will be furnished check of register, Form 602, by the conductor.
At Tilden Junction and Carthage Jct. enginemen of westward trains will be furnished check of register, Form 602, by the conductor.
8. Commercial Spurs—

	Miles from Fertile	Car Capacity
Smisek	7.0	3
Kohler	39.2	5
Walkerton	51.0	8

NINTH SUBDIVISION.

(FAIRVIEW BRANCH)

1. Bridge and Engine Restrictions—
Engines heavier than class W not permitted.
2. Speed Restrictions—
Schedule time between stations and fifteen (15) miles per hour between Keystone Jct. and Berndt.
3. Clearance Exceptions—
Nos. 755 and 756 will not require clearance at Fairview Jct. or Great Bend.

ALL SUBDIVISIONS.

1. Conductors of work trains will issue instructions to their flagmen in writing, except when flagmen go back immediately to stop an approaching train.
2. Speed Restrictions—
Passenger trains, one (1) mile per minute.
All trains thirty (30) miles per hour over interlocked crossings. Fifteen (15) miles per hour through crossovers, turnouts, gauntlets and passing telegraph offices where orders are received. Engines classes A, Q-5 and Q-6, sixty (60) miles per hour; W, W-1, W-2, W-3, W-4 and W-5, fifty (50) miles per hour.
Switch engines moving between stations, under steam, fifteen (15) miles per hour.
Trains handling steam wrecking derrick, pile driver or locomotive crane, thirty (30) miles per hour.
3. Except as otherwise provided enginemen will be required only to consult register at initial or starting point.
4. Before moving a work or wrecking train, the whistle signal (14-b) or (14-h) must be sounded for the protection of men working about such trains.
5. When conditions permit, enginemen on freight trains will receive proceed signal from rear of train before passing any station.
6. When a siding is to be used temporarily as a main track, the switches will be set and locked for the siding and be protected by flagman until train order covering the movement is issued to all trains and the section foreman of that section; the flagman to remain until released by the train dispatcher.
7. In automatic block territory gas-electric motor cars must not be stopped on sand, and when handled in freight trains, must be behind caboose.
8. Precautions must be taken on double track to prevent accidents from swinging doors or other loose construction attached to cars or locomotives. Trains handling logs must stop when being met or passed by passenger trains.
9. Before occupied outfit cars are switched or handled, air brakes must be cut in.
10. IN TERRITORY EQUIPPED WITH AUTOMATIC BLOCK SIGNALS:
When a train dispatcher desires to advance a train from a station where by the rule it should enter the siding before passing a train order office, he may instruct the operator to use white signal as prescribed by Transportation Rule 12-c. The engineman may then continue to move his train on the main track to the signal at restricted speed and there be governed by train orders that are addressed to his train.
When a train is stopped by a stop and proceed signal it may proceed at once at restricted speed expecting to find a train in the block, broken rail, obstruction or switch not properly set and must 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.
11. On all branch line sidings trains may expect to find cars at any time.
12. Spring Switches—
Maximum speed for all facing point and trailing point movements through switch fifteen (15) miles per hour. Trailing movements on the track for which the switch is normally lined may be made at normal speed.
Trains trailing through or stopping on a spring switch must not back up or take slack until points have been thrown by hand. Flying switches over or through spring switches are prohibited. When operated by hand, lever must be moved slowly, keeping a steady pressure on the handle until the switch is thrown and the handle is in the notch on the switch stand provided for it. When signal governing block in which spring switch is located is at stop, or where automatic block signals do not govern account trains running against current of traffic, facing point movements must not be made over switch until points have been examined.
Sand must not be used over points of spring switches.
13. Derail switches will be set in derail position when not in use.
14. Trains pulling into side tracks, or leaving the main line at junction points, must pull entirely into clear of insulated joints before stopping to pick up the man attending the switch.

15. At terminals where engines are not changed nor train line separated on passenger trains and terminal brake test is not made by carmen, after outgoing crew takes charge, a running brake test must be made as soon as train is moving at moderate speed. When running test is made, trainmen should be on steps to see that brakes apply properly and then give proceed signal to engineman.
16. Always observe position of switch points after throwing switch, and see that the switch lever is pushed firmly into the notch before leaving switch.
17. Helper engines waiting to help trains will keep clear of main line until train to be helped has arrived and stopped.
18. At points where there are close clearances, trainmen will work on the opposite side of train from them; and, if necessary, the fireman will receive the signals and communicate them to the engine-men.
19. **BULLETIN STATIONS—**
 St. Paul.
 Minneapolis.
 Northtown.
 Little Falls.
 Staples.
 Lake Park.
 Dilworth.
 Brainerd.
 Wahpeton.
 East Grand Forks.
 Tilden Junction.
- 20—**STANDARD TIME CLOCKS—**
 St. Paul.
 Northtown.
 Staples.
 Lake Park.
 Dilworth.
 Brainerd.
 East Grand Forks.
21. **WATCH INSPECTORS—**
 St. Paul—Christensen's, A. Lindahl, C. J. & H. W. Anderson.
 Minneapolis—Samuel H. Lindquist, W. B. Dahl, Munns & Pomerleau, Geo. H. Johantgen, Allen & Berg.
 St. Cloud—Webster Jewelry & Music Co.
 Little Falls—E. V. Wetzel.
 Staples—Jesse L. Cross.
 Brainerd—C. L. Burnett.
 Morris—S. H. Grosland.
 Wahpeton—E. E. Bassett.
 Grand Forks—E. A. Arhart.
 Pembina—M. H. Miller.

NOTE.

Effective with Time Table No. 66-A, Schedule meeting or passing stations are indicated by figures in full-faced type; numbers of the trains meeting, passing, or being passed will not be shown.

SPEED TABLE

Time per Mile			Miles per Hour		
Min.	Sec.		Min.	Sec.	Hour
1	..	60	2	..	30
1	1	59	2	10	27.6
1	2	58	2	15	26.6
1	3	57.1	2	20	25.7
1	4	56.2	2	30	24
1	5	55.3	2	40	22.5
1	6	54.5	2	45	21.8
1	7	53.7	2	50	21.2
1	8	52.9	3	..	20
1	9	52.1	3	9	19
1	10	51.4	3	20	18
1	12	50	3	31	17
1	15	48	3	45	16
1	20	45	4	..	15
1	25	42.3	5	..	12
1	30	40	6	..	10
1	40	36	7	30	8
1	45	34.3	10	..	6
1	50	32.7			

RAILROAD CROSSINGS AND INTERLOCKINGS.

First Subdivision—

NORTHTOWN
 G. N. Crossing.
COON CREEK
 G. N. Junction—Interlocked.
ELK RIVER
 G. N. Junction—Automatic Interlocking.
ST. CLOUD
 G. N. Crossing—Interlocked.
STAPLES
 Lake Superior Division Junction—Interlocked.

Second Subdivision—

WADENA
 G. N. Crossing—Automatic Interlocking.
DETROIT LAKES
 Soo Line Crossing—Interlocked.
MANITOBA JUNCTION
 6th Subdivision Junction—Interlocked.
GLYNDON
 G. N. Crossing—Interlocked.

Fourth Subdivision—

SAUK CENTRE
 G. N. Crossing—Automatic Interlocking.
VILLARD
 Soo Line Crossing.

Fifth Subdivision—

HENNING
 Soo Line Crossing.
FERGUS FALLS
 G. N. Crossing—Automatic Interlocking.
BETWEEN WATASCO AND BRECKENRIDGE
 G. N. Crossing—Interlocked.
WAHPETON—
 C. M. St. P. & P. Crossing
WYNDMERE
 Soo Line Crossing.

Sixth Subdivision—

MANITOBA JUNCTION
 2nd Subdivision Junction—Interlocked.
BETWEEN HAROLD AND CROOKSTON
 G. N. Crossing—Automatic Interlocking.
BETWEEN ANGLIM AND HIXON
 G. N. Crossing—Automatic Interlocking.

Seventh Subdivision—

BETWEEN GRAND FORKS AND BOLACK
 Two G. N. Crossings.
FOREST RIVER
 Soo Line Crossing—Interlocked.
BETWEEN KELLOGG AND GRAFTON
 G. N. Crossing.

Eighth Subdivision—

TILDEN JUNCTION
 G. N. Crossing—Interlocked.
BETWEEN DOROTHY AND BUFFINGTON
 G. N. Crossing—Interlocking. Operated by trainmen.

INSTRUCTIONS TO TRAINMEN ON OPERATIONS OF AUTOMATIC INTERLOCKING PLANTS.

Standard Interlocking Rules 601 to 605 and 661 to 671, Inclusive, Supplemented by the Following General and Special Instructions shall govern in the use of Automatic Interlocking Plants.

GENERAL INSTRUCTIONS.

Signals at automatic interlockings clear on the approach of trains, and a train on either line first receiving a proceed signal indication will move over the crossing regardless of class.

When a train is stopped by a home signal and no train on the opposing line is approaching the crossing, trainman will go to the crossing, unlock the Release Box and operate the hand release.

To Operate Hand Release. Turn knob to the right until it stops. Hold in this position 3 or 4 seconds, then release knob. The clockwork release will return to its normal position after the required time interval has expired, and signal for the desired route should indicate Proceed. If desired signal fails to indicate proceed, and no smashboards are in use, trainman may signal his train over the cross-

ing after making certain that all signals for conflicting routes are at **Stop**, and no conflicting train movement is evident.

Where smashboards are in use and are in the **Proceed** position and operation of the hand release does not clear the home signal for the route desired, trainman shall lock the **Release Box**, and signal his train to proceed over the crossing, after making certain that all signals and smashboards on conflicting routes are at **Stop** and no immediate conflicting train movement is evident.

If smashboards for the route desired are in the **Stop** position and operation of the hand release does not clear the desired signal, trainman must operate the smashboard by hand and then if the desired signal does not clear, may signal his train to proceed over the crossing, after making certain that signals and smashboards on all conflicting routes are at **Stop** and no immediate train movement is evident.

To Operate Smashboard by Hand. Crank for hand operation of smashboard is located in the release box at crossing. After opening the small door at the back of the mechanism locked with a switch lock, place crank over the shaft, turn crank slowly and uniformly to the left until the smashboard has moved to the **Proceed** position, being sure the entire stroke has been completed. Restore Crank and Lock all apparatus before leaving.

SPECIAL INSTRUCTIONS FOR ELK RIVER AUTOMATIC INTERLOCKING.

The junction switch and crossover are each equipped with ground throw switch machines and electric switch locks.

The smashboards and the top arm of the Northern Pacific signals will clear automatically for trains making through moves with the current of traffic on the main tracks.

The dwarf signals will clear automatically for through moves against the current of traffic on the main tracks when a train is within two hundred (200) feet of these signals.

If a train is stopped by a home or dwarf signal and there is no conflicting train movement evident it may proceed after ascertaining if the smashboard for the route is clear and the switches are properly lined. If the smashboard for the route is not in the clear position trainman shall operate it to the clear position by hand.

For train movements from the westward main track to the Great Northern Princeton line the train will stop at the westward home signal. Trainman will operate the **Electric Switch Lock** and reverse the switch and derail by throwing over the lever of the junction ground throw switch machine. The **Bottom** arm of the westward home signal will then clear.

For train movements from the Great Northern Princeton line to the eastward main track the train will stop at the Great Northern home signal. Trainman will push the button of both the eastward and westward switch **Indicators** and if both of the indicators indicate clear he may operate the electric switch locks and reverse the junction and crossover switches by throwing over the levers of the ground throw switch machines. The top arm of the eastward Great Northern home signal will then clear.

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

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

To Operate Time Release. Open the top door of the iron box which is marked **Release** and turn the knob of the release to the right until it stops. Hold 3 or 4 seconds and then release knob. The clockwork release will return to its normal position in two minutes which should release the electric lock as indicated by the indicator.

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

All Apparatus must be returned to its normal position and Locked before leaving.

SPECIAL INSTRUCTIONS FOR WADENA AUTOMATIC INTERLOCKING

Hand thrown switches within the limits of the plant are provided with hand operated **Facing Point Locks** which must be operated before the switch can be thrown. Before any attempt is made to operate a switch inside the interlocking home or dwarf signals, after making certain that home signals and smashboards on the opposing line are at **Stop** and no immediate train movement is evident. Train movements through any of these switches will be governed by the **Dwarf** signal indication. All switches of the route desired must be lined up before the movement is made and then if crossing is clear the proper dwarf signal will indicate **Proceed**.

SPECIAL INSTRUCTIONS FOR SAUK CENTRE AUTOMATIC INTERLOCKING

Switches located inside the home signals of the plant are operated by switch stands provided with **Point Locks** operated by the lever of the switch stand or by ground throw safe lock switch machines. Derails, pipe connected to the switch stand or switch machine, are located at the fouling point of the Great Northern stockyard track, at the junction of the Park Rapids branch with the Great Northern main line, at the west end of the transfer track and at the west end of the Great Northern siding. When trains are heading in on these tracks the switch must not be closed until the train has cleared the derail.

Dwarf signals governing train movements from sidings to the main tracks will indicate **Proceed** when the switch for the route desired is thrown.

At signal 36.7 a **Circuit Controller** for hand operation is provided to permit westward trains to do switching between signals 36.7 and 37.1 without interfering with the Great Northern main line crossing. This hand operated switch is located on the track side of the relay case at signal 36.7 and is locked with a switch lock.

When necessary for trains to do switching between signals 36.7 and 37.1 the **Circuit Controller** at signal 36.7 should be unlocked and the lever pulled down before train passes the signal, which will permit the switching to be done without interfering with train movements on the Great Northern main line.

The lever of **Circuit Controller** must be restored and **Locked** in proper position before leaving.

SPECIAL INSTRUCTIONS FOR FERGUS FALLS AUTOMATIC INTERLOCKING

Hand throw switches inside the home signals of the plant are equipped with **Point Locks** operated by the lever of the switch stand to insure that the switch point is up tight against the rail. Derails are pipe connected to the switch stands for the Northern Pacific siding and the Great Northern north and south sidings. When trains are heading in on these tracks the switch must not be closed until train has cleared the derail.

Dwarf signals governing train moves from sidings are located at the derails which are pipe connected to the hand throw switch stands and will indicate proceed when the switch for the route is lined up.

A train or engine wishing to use the transfer track will stop at the transfer track switch and trainman will unlock and open the door marked **Electric Lock**. If the small semaphore indicator indicates **Clear** when the door is opened the switch machine may be unlocked by turning the crank to the left.

If the indicator indicates **Stop** and no immediate conflicting train movement is evident, unlock and open the door marked **Release** and turn the knob of the release to the right until it stops. Hold in this position three or four seconds and then release knob. When the release runs down the indicator will show clear and the switch machine may be unlocked by turning the crank to the left.

When the transfer track switches have been thrown the proper **Dwarf** signal for the transfer track will indicate **Proceed**. Close and lock apparatus before leaving.

TONNAGE RATING

	ENGINES				
	Class S10 Tons	Class X Tons	Class T Tons	Class W Tons	Classes W3&W5 Tons
Eastward.					
Dilworth to Lake Park with Pusher, Glyndon to Witherow.....			2700	3700	4500
Dilworth to Lake Park without Pusher.....			2200	3400	4200
Lake Park to Staples.....			3200	4700	5200
Staples to Little Falls.....	1800	2400	2500	4500	6000
Little Falls to Northtown.....			3000	5000	6800
Brainerd to Little Falls.....	1800	2400	2500	4500	6000
Morris to Glenwood.....	640	790			
Glenwood to Sauk Centre.....	1800	2200			
Sauk Centre to Little Falls.....	890	1090			
Oakes to Gwinner.....			2050		
Gwinner to Wahpeton.....			3500		
Wahpeton to Fergus Falls.....			1750		
Wahpeton to Fergus Falls (doubling French).....			2500		
Fergus Falls to Henning.....			1700		
Henning to Staples.....			3300		
Pembina to Meckinock.....			3200		
Meckinock to East Grand Forks....			3500		
East Grand Forks to Lake Park....			2600		
Westward.					
Northtown to Little Falls.....			2000	3000	4100
Little Falls to Staples.....	1400	1750	1800	2700	3750
Staples to Lake Park.....			3200	4200	5000
Lake Park to Dilworth.....			Car Limit	Car Limit	Car Limit
Little Falls to Brainerd.....	1575	1950	2000	3000	4100
Little Falls to Sauk Centre.....	850	950	1000		
Sauk Centre to Glenwood.....	1300	1550			
Glenwood to Morris.....	1900	2300			
Staples to Wahpeton.....			2100		
Wahpeton to Milnor.....			2600		
Milnor to Oakes.....			2300		
Lake Park to East Grand Forks....			2400		
East Grand Forks to Pembina.....			2500		

TONNAGE RATING INSTRUCTIONS:

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

MAXIMUM CLEARANCES

LIMIT OF LOAD—MEASUREMENT

HEIGHT ABOVE TOP OF RAIL

ST. PAUL DIVISION

	1'-0" Wide	2'-0" Wide	3'-0" Wide	4'-0" Wide	5'-0" Wide	6'-0" Wide	7'-0" Wide	7'-6" Wide	8'-0" Wide	Max. Height	Max. Width
1st Subdivision....	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	11'-6"
2nd Subdivision....	20'-3"	20'-3"	20'-3"	20'-1"	19'-10"	19'-6"	19'-2"	19'-0"	18'-9"	20'-3"	11'-6"
3rd Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
4th Subdivision....	20'-3"	20'-3"	20'-3"	19'-3"	19'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
5th Subdivision....	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	11'-6"
6th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
7th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-2"	20'-3"	11'-6"
8th Subdivision....	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	11'-6"
8th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
9th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"

1st Subdivision....	M. L., Northtown to Staples.....
2nd Subdivision....	M. L., Staples to Dilworth.....
3rd Subdivision....	Little Falls to Brainerd.....
4th Subdivision....	Little Falls to Morris.....
5th Subdivision....	Wadena Jct. to Oakes.....
6th Subdivision....	Manitoba Jct. to E. Grand Forks.....
7th Subdivision....	E. Grand Forks to Winnipeg.....
8th Subdivision....	Fertile to Carthage Jct.....
8th Subdivision....	Key West to Sherack.....
9th Subdivision....	Fairview Jct. to Berndt.....

MAXIMUM CLEARANCES

LIMIT OF LOAD—MEASUREMENT

HEIGHT ABOVE TOP OF RAIL

ST. PAUL DIVISION

	8'-6" Wide	9'-0" Wide	9'-6" Wide	10'-0" Wide	10'-2" Wide	10'-6" Wide	11'-0" Wide	11'-8" Wide	Max. Height	Max. Width
1st Subdivision....	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	17'-8"	11'-6"
2nd Subdivision....	18'-6"	18'-4"	18'-2"	18'-2"	17'-10"	17'-7"	17'-4"	16'-3"	20'-3"	11'-6"
3rd Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
4th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
5th Subdivision....	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	19'-3"	11'-6"
6th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
7th Subdivision....	19'-11"	19'-8"	19'-5"	19'-2"	19'-2"	19'-0"	18'-8"	18'-5"	20'-3"	11'-6"
8th Subdivision....	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	19'-5"	11'-6"
8th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"
9th Subdivision....	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	20'-3"	11'-6"

W. D. PEARCE,
Asst. Supt.

L. J. BENNER,
Trainmaster.

C. C. CORSER,
Trainmaster.

H. FLANAGAN,
Trainmaster.

C. H. SCHUTT,
Trainmaster.

E. H. BRILEY,
Chief Dispatcher.