



Highway Department


Telephone: 701-298-2370

Fax: 701-298-2395

SMB-HWY@casscountynd.gov

MEMORANDUM

TO: Cass County Commission

FROM: Tom Soucy, County Engineer 

DATE: February 9, 2024

SUBJECT: Consent Agenda Item for February 20, 2024, Cass County Commission. Spring Load Restrictions on County Highways.

I would like to impose spring weight restrictions on Cass County Highways on, or after February 21, 2024, depending on the weather. I've enclosed a resolution and map with the proposed spring load restriction postings. The criteria used for pavements was the pavement condition and area served. Most small towns have one unrestricted road access.

Gravel roads are posted at a 6 Ton restriction. The exception is a section of County 11 west of Grandin.

SUGGESTED MOTION:

Adopt resolution implementing spring load restrictions on or after February 21, 2024, as determined by the county engineer.

RESOLUTION #2024-3
RESOLUTION TO IMPLEMENT SPRING LOAD RESTRICTIONS
ON COUNTY HIGHWAYS

WHEREAS: Soft base conditions experienced during spring thaw reduce the load carrying capacity of County Highways;

WHEREAS: The Cass County Board of Commissioners desires to prevent serious damage to County Highways;

WHEREAS: 39-12-03 of the North Dakota Century Code authorizes local authorities to impose vehicle weight restrictions on County Highways;

NOW THEREFORE: Be it resolved by the Cass County Board of Commissioners that spring load restrictions will be imposed upon Cass County Highways in the following manner: All County Highways to be posted in accordance with the Cass County 2024 Spring Load Restriction Map dated February 5, 2024. Spring load restrictions will be effective at 12:01 AM on or after February 21, 2024, as determined by the County Engineer.

Dated this 20th day of February 2024.

APPROVED:

Chairperson
Cass County Commission

ATTEST:

Brandy Madrigga
Cass County Auditor

CASS COUNTY SPRING LOAD RESTRICTIONS

Cass County will impose Load Restrictions on all Highways effective on or after February 21, 2024. Restrictions shall remain in effect until pavement subgrade conditions warrant removal, generally about the 15th of May.

Additional information is available at www.casscountynd.gov or at the Cass County Highway Department at 298-2370.

CASS COUNTY HIGHWAY DEPARTMENT SPRING LOAD RESTRICTION POLICY

Under authority of NDCC §39-12-03, local authorities may restrict loads on their highways. The purpose of the load restrictions is to protect the highways from break-up during the spring thaw. Restrictions may be placed at other times during the year to protect highways with weak surfaces from load damage. The following tables list the Cass County Spring Load Restrictions. These restrictions are subject to change as conditions warrant. Actual load restriction postings take precedence over those listed here and are in effect when the load restriction signing is in place.

It is the Department's position to not implement Spring Load Restrictions any earlier than necessary. The Department monitors the daily high/low temperatures, which are used to calculate accumulated Freeze and Thaw Indexes. From these indexes, highway engineers can determine when to implement and remove load restrictions.

Be aware that this method is only one decision tool the Department uses to determine when to implement and remove load restrictions. The Department still relies heavily on the existing highway conditions and past experience of its field personnel when making the final decision of when to implement and remove load restrictions.

Implementation and removal of Spring Load Limit Restrictions is highly dependent on weather. It is the Department's desire to protect its roads while minimizing the period the roads are restricted. The implementation and removal dates for the Spring Load Limit Restrictions are determined based on recommendations from field personnel and the Thaw Index. The Thaw Index is the average daily temperature as compared to a temperature of 29 degrees F. Anytime the average daily temperature exceeds 29 degrees F. we feel we have a thawing day. For example, if a day's high and low temperatures are 42 degrees F. and 20 degrees F. respectively, then the average temperature for the day is 31 degrees F ($(20+42)/2=31$). When we compare the day's average temperature of 31 to the previous referenced 29 we find we have 2 degree days of thawing taking place for that day. We monitor these temperatures daily and accumulate the amount of thawing degree days taking place. When the amount of accumulated thawing degree days approaches 25 to 50 degree days, we feel enough thawing has taken place to warrant implementing the spring load restrictions.

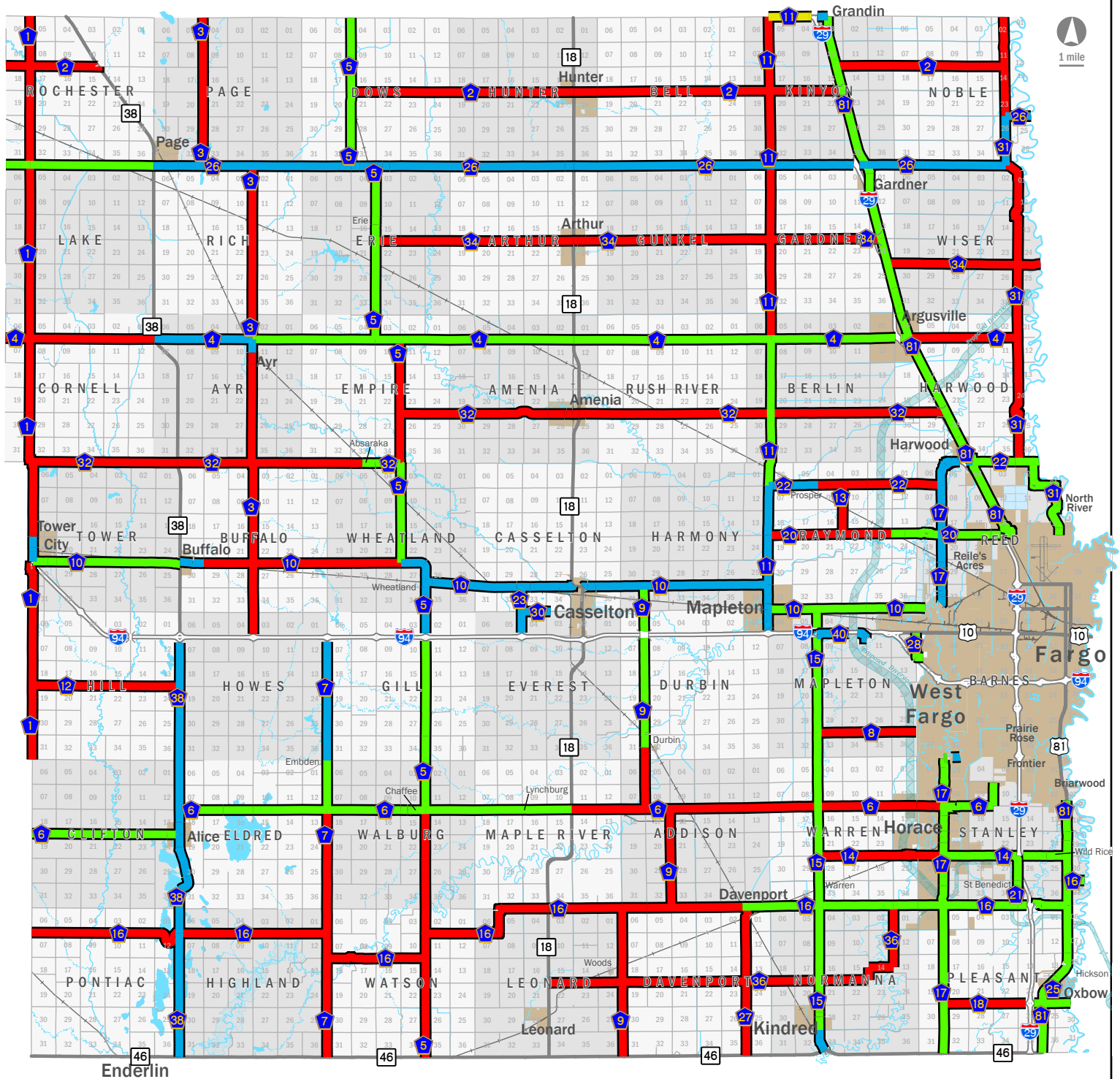
	<u>By Legal Weight:</u>	<u>8 TON:</u>	<u>7 TON:</u>	<u>6 TON:</u>
Single Axle	20,000 lbs	16,000 lbs	14,000 lbs	12,000 lbs
Tandem Axle	34,000 lbs	32,000 lbs	28,000 lbs	24,000 lbs
3 Axles or more	17,000 lbs/axle	14,000 lbs/axle	12,000 lbs/axle	10,000 lbs/axle
Max Axle Group	48,000 lbs	42,000 lbs	36,000 lbs	30,000 lbs
Gross Vehicle Weight	105,500 lbs	105,500 lbs	105,500 lbs	80,000 lbs

**CASS COUNTY LOAD RESTRICTION
TABLE**

Highway Number	Location	Approximate Length	Posting Status
1	Steele Co. Line to 1/2 mile N. of Cass 10	21.5	6 Ton
1	Cass 10 to 1/2 mile N.	0.5	Legal Wt.
1	I-94 to 3 miles S. of Cass 12	8	6 Ton
2	Barnes Co. Line to State 38	4	6 Ton
2	Cass 5 to Cass 81	20	6 Ton
2	Cass 81 to Cass 31	7	6 Ton
3	Steele Co. Line to Cass 26	6	6 Ton
3	Cass 26 to Cass 4	7	6 Ton
3	Cass 4 to Ayr	0.5	Legal Wt.
3	Ayr to I-94	11.5	6 Ton
4	Barnes Co. Line to State 38	6	6 Ton
4	State 38 to Cass 3	4	Legal Wt.
4	Cass 3 to Cass 81	26.5	8 Ton
4	Cass 81 to Cass 31	4.5	6 Ton
5	Traill Co. Line to Cass 26	6	8 Ton
5	Cass 26 to Cass 4	7	8 Ton
5	Cass 4 to Cass 32 S. Jct.	5	6 Ton
5	Cass 32 S. Jct. to Cass 10	4	8 Ton
5	Cass 10 to I-94	2	Legal Wt.
5	I-94 to Cass 6	7	8 Ton
5	Cass 6 to State 46	10	6 Ton
6	Barnes Co. Line to Cass 38	6	8 Ton
6	Cass 38 to State 18	16	8 Ton
6	State 18 to Cass 17	15	6 Ton
6/76 th Ave & 45 th St	Cass 17 to 45 th Street South	2	8 Ton
6/52 nd Ave	Cass 17 to Fargo City Limits	0.5	Legal Wt.
7	I-94 to 42 nd Street SE	5	Legal Wt.
7	42 nd Street SE to Cass 6	2	8 Ton
7	Cass 6 to State 46	10	6 Ton
8	Cass 15 to 1 mile W. of Cass 17	4	6 Ton
9	Cass 10 to Durbin	6.5	8 Ton
9	Durbin to Cass 16	6.5	6 Ton
9	Cass 16 to State 46	6	6 Ton
10	Cass 1 to State 38	6	8 Ton
10	State 38 thru Buffalo	1	Legal Wt.
10	Buffalo to Cass 5 W. Jct.	8	6 Ton
10	Cass 5 W. Jct. to State 18	8	Legal Wt.
10	State 18 to Cass 11	7.5	Legal Wt.
10	Cass 11 to Sheyenne Diversion Bridge	6.5	8 Ton
11	Hwy 81 to I-29 (Grandin)	0.5	Legal Wt.
11	I-29 (Grandin) to 1.8 miles W.	1.8	7 Ton
11	1.8 miles W. of I-29 to Cass 4	13.0	6 Ton

Highway Number	Location	Approximate Length	Posting Status
11	Cass 4 to Cass 22	6	8 Ton
11	Cass 22 to I-94	6	Legal Wt.
12	Cass 1 to Cass 38	6	6 Ton
13	Cass 22 to Cass 20	2	6 Ton
14	Cass 15 to Cass 17	5	6 Ton
14	Cass 17 to Cass 81	5	8 Ton
15	Cass 10 to Kindred (53 rd St SE)	17	8 Ton
15	Kindred (53 rd St SE) to State 46	1	Legal Wt.
16	Barnes Co. Line to Cass 27	30	6 Ton
16	Cass 27 to Minnesota Line	14	8 Ton
17	I-29 to Cass 10	6	Legal Wt.
17	Cass 6 to State 46	12	8 Ton
18	Cass 17 to I-29	3.5	6 Ton
18	I-29 to Minnesota Line	2	8 Ton
20	Cass 11 to 5 miles E.	5	6 Ton
20	2 miles W. of Cass 17 to I-29	4.3	8 Ton
21	Cass 14 to Cass 16	2	8 Ton
22	Cass 11 to 2 miles E.	2	Legal Wt.
22	2 mile E. of Cass 11 to Cass 17	5	6 Ton
22	Cass 81 to Minnesota Line	3	8 Ton
23	Cass 10 to I-94	2	Legal Wt.
25	Cass 81 to 0.4 mile S.	0.4	8 Ton
26	Barnes Co. Line to State 38	6	8 Ton
26	State 38 to Minnesota Line	36	Legal Wt.
27	Cass 16 to State 46	6	6 Ton
28	Main Ave. to Drain 21	1	8 Ton
30	Cass 23 to 1 Mile E.	1	Legal Wt.
31	Traill Co. Line to Cass 26 N. Jct.	4	6 Ton
31	Cass 26 N. Jct. to Cass 26 S. Jct.	2	Legal Wt.
31	Cass 26 S. Jct. to Cass 22	12	6 Ton
31	Cass 22 to Cass 20	4	8 Ton
32	Cass 1 to Absaraka	13.5	6 Ton
32	Absaraka to Cass 5	1.5	8 Ton
32	Cass 5 to Cass 81	22	6 Ton
34	Cass 5 to Minnesota Line	27	6 Ton
36	State 18 to Cass 16	17	6 Ton
38	I-94 to State 46	17	Legal Wt.
40	Cass 15 to 38 th ST NW	2	Legal Wt.
81	Traill Co. Line to Cass 20	21	8 Ton
81	76 th Ave. S. to State 46	10	8 Ton

2024 Spring Load Restrictions



February 5, 2024

BY LEGAL WEIGHT 8-TON 7-TON 6-TON

Single Axle	20,000 lbs	16,000 lbs	14,000 lbs	12,000 lbs
Tandem Axle	34,000 lbs	32,000 lbs	28,000 lbs	24,000 lbs
3 Axles or More	17,000 lbs/axle	14,000 lbs/axle	12,000 lbs/axle	10,000 lbs/axle
Max Axle Group	48,000 lbs	42,000 lbs	36,000 lbs	30,000 lbs
Gross Vehicle Weight	105,500 lbs	105,500 lbs	105,500 lbs	80,000 lbs

Cass County Highway Department

Jason Benson
County Engineer, P.E.

Tom Soucy
Deputy County Engineer, P.E.

Blaine Laaveg
Highway Superintendent



1201 Main Ave. W
West Fargo, ND 58078

(701) 298-2370

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