

NEW Load Restrictions and Overweight/Oversize Permit Requirements

Illegally overweight vehicles damage Minnehaha County roads, shorten road life, and increase costs to both the trucking industry and taxpayers. Roads and bridges have to be designed, built, and maintained to carry heavy axle loads. Every axle passing over a highway consumes a portion of the pavement's life. Significantly overweight trucks cause rutting of pavements and damage bridges, both of which threaten public safety. Extensive road testing over the past fifty years have shown that the amount of pavement life consumed by heavy axles greatly exceeds the amount of life consumed by lighter axles.¹ The following table¹ illustrates what percentage of pavement life is consumed versus a legal 20,000 pound axle load:

Axle Weight (pounds)	Pavement Life Consumed
2,000	.001
10,000	.06
18,000	.66
20,000	1.0
22,000	1.46
24,000	2.07

It is evident that heavy axles consume much more pavement life than light axles. A standard legal load of 20,000 pounds does 1000 times the damage as a passenger car. Secondly, it is worth noting that the amount of life consumed rises much faster than the axle weight. For a seemingly modest increase of 10% in weight over the standard legal load (22,000 lbs vs. 20,000 lbs), the amount of consumed pavement life soars by nearly 50%. A 20% overweight load consumes more than twice as much pavement life as a legal load. Furthermore, even if the total gross vehicle weight would not exceed the legal limit but one axle is overweight, the damage caused by the single overweight axle or axle group exceeds the reduced damage being imparted by the lighter axles.

For these reasons, it is imperative that Minnehaha County develop and enforce rules to protect its roadways from damage caused by illegally overweight vehicles. On December 12, 2012 Minnehaha County adopted Resolution MC12-72 which authorizes the Highway Department to collect fees. Then, on February 26, 2013, Resolution MC13-10 was adopted which added the ability to provide users with an Annual Overweight Permit.

Any carrier operating on Minnehaha County highways which would otherwise need an overweight or oversize permit when operating on State highways, must acquire a similar permit from the Minnehaha County Highway Department whether or not they intend to drive on State-owned roadways.

In general, if a truck and truck/trailer combination exceeds any **one** of the following, an Overweight/Over-width special permit from the Minnehaha County Highway Department is required:

- Gross Vehicle Weight > 80,000 lbs (40 tons)
- Width > 102 inches or 8.5 feet
- Height > 14 feet
- Length > 98 feet
- 2 axles exceeding 40,000 lbs (non-tandem)
- 3 axles exceeding 60,000 lbs (non-tridem)
- 4 axles exceeding 80,000 lbs
- 5 axles exceeding 85,000 lbs
- 6 axles exceeding 90,000 lbs
- 7 or more axles exceeding 95,000 lbs

¹ SDDOT Briefing, *Truck Weights and Highways*, by the SDDOT Office of Research, September 24, 2003

Minnehaha County **does not allow any carrier to exceed any one of the following and no permit will be granted to any carrier exceeding these maximum values:**

- Any single axle carrying more than 21,000 pounds
- Any tandem axle carrying more than 35,700 pounds (96" apart or less axle spacing)
- Any tridem axle carrying more than 44,100 pounds (96" apart or less axle spacing)
- Other legal axle groups based on the Bridge Weight Formula as discussed in the Motor Carrier Handbook on pages 26-30 plus 5%.

These maximum values do not account for the State's 10% allowable tolerance from legal loads (not permitted loads) for agricultural hauling from Point of Harvest and the 5% allowable tolerance for Hauling from a Farm as found on page 31 of the *Motor Carrier Handbook*.

SPRING TIME LOAD LIMIT RESTRICTIONS: If spring load weight restrictions are in effect, the spring load weight limit restrictions govern.

BRIDGES: For overweight and over-width permits, the carrier must provide a detailed route description. Minnehaha County Highway personnel will review the proposed route for any bridges that are posted for reduced maximum loads. If posted bridges exist on the proposed route, Minnehaha County personnel will contact the carrier and determine a mutually agreeable route where no bridge postings exist.

OVERVIEW OF STATE POLICY: For allowable legal loads without a permit, the maximum allowable weight of a vehicle depends upon the number and spacing of its axles and upon the size of its tires as described in the *2007 South Dakota Commercial & Agricultural Vehicle Handbook* also known as the Motor Carrier Handbook. This publication can be found in its entirety at <http://www.sdtruckinfo.com/motorcarrierhandbook.asp>.

These legal load requirements, weight and size restrictions, and need for overweight permits and oversize permits also apply to Minnehaha County highways. The One-Stop Shop for South Dakota Trucking Information can be found at <http://www.sdtruckinfo.com/>.

Carriers operating in South Dakota must ensure that they are operating within the maximum length, height, width and axle limitations and that they meet South Dakota bridge and weight laws. Information can be obtained by contacting the following agency or visiting the South Dakota Highway Patrol Motor Carrier Services web page at: http://dps.sd.gov/enforcement/highway_patrol/motor_carrier_srvs_info.aspx

Below is a brief synopsis of size & weight regulations. For complete information and illustrations, please refer to the SD Motor Carrier Handbook, **Chapter 4: Permits**.

Vehicle Size Regulations

Height Limitations

The maximum height for any vehicle, including load, is 14 feet.

Exceptions:

- 1. A vehicle with a load of baled hay is permissible up to 14 feet 3 inches***
- 2. Farm Machinery and Fire Equipment: No Height Limit***

Width Limitations

The maximum width of any vehicle is 102 inches (8 feet 6 inches).

Exception:

1. Farm Machinery Operated by a Farmer: No Width Limitation except on the interstate system (daylight hours only)

Length Limitations

Length limitations are illustrated in Table 5. Unless specifically addressed, the length limits shown only apply to the vehicle, and do not apply to the load carried on it. They are exclusive of the load overhang, retractable extensions used to support loads, and safety or energy conservation devices such as mirrors, turn signal lamps, hand holds, flexible fender extensions, and mud flaps. Retractable extensions must be retracted if not being used to support overhanging loads.

Overhang

Loads or retractable extensions on any vehicle may not extend more than four feet beyond the rear bumper, bed or body, or more than three feet beyond the front bumper, bed or body of the vehicle carrying the load.

Vehicle Weight Regulations

Axle Group Limitations

The maximum allowable weight for all individual axles and axle groups is limited by statute:

Group Type

- Maximum Allowable Weight Single Axles - 20,000 pounds
- Tandem Axles - 34,000 pounds
- Tridem Axles - 42,000 pounds
- Other Axle Groups - based on the Bridge Weight Formula.

Tire Limitations

The weight supported on a tire may not exceed 600 pounds per inch width of tire, if that tire is on:

- A steering axle;
- An axle equipped with dual tires; or
- A trailer towed by a vehicle with a Gross Vehicle Weight Rating of 11,000 pounds or less.

The weight supported by tires mounted on other axles may not exceed 500 pounds per inch width of tire.

For more information regarding length, height, width, and axle limitations, please contact:

South Dakota Highway Patrol
Motor Carrier Services
118 West Capitol Avenue
Pierre, SD 57501-2000
(605) 773-4578

Motor Carrier Handbook

PROCEDURE AND FEE CALCULATION

AXLE & LOAD INFORMATION

TOTAL NUMBER OF AXLES _____ TOTAL GVW _____ lbs

	Front Axle 1	Axle 2	Axle 4	Axle 4	Axle 5	Axle 6	Axle 7
Weight (lbs)							
Number of Tires							
Tire Width (inches)							
Space Between Axles (feet)							
	Axle 8	Axle 9	Axle 10	Axle 11	Axle 12	Axle 13	Axle 14
Weight (lbs)							
Number of Tires							
Tire Width (inches)							
Space Between Axles (feet)							
	Axle 15	Axle 16	Axle 17	Axle 18	Axle 19	Axle 20	Axle 21
Weight (lbs)							
Number of Tires							
Tire Width (inches)							
Space Between Axles (feet)							

SINGLE TRIP PERMIT FEE: Completing the above table is required to assess the legal weight per axle and/or axle group based on the *bridge weight formula* as found in the State of South Dakota’s Motor Carrier Handbook. The Legal Weight Calculator can be found at <https://apps.sd.gov/applications/hy30commpermit/legalcal.asp>.

County staff will use the Legal Weight Calculator to calculate your truck’s legal load based on the configuration provided in the above table. The GROSS VEHICLE WEIGHT for the total number of axles of the load being permitted will be used to determine the pounds overweight by subtracting the GROSS VEHICLE WEIGHT from the legal weight. Then, using the distance traveled as determined through the route specified, the overweight fee cost will be calculated at the rate of \$ 0.40 per ton per mile. In addition, a standard permit cost fee of \$20.00 is added to the overweight fee to determine the Total Single Trip Permit Cost. An example is shown below.

SINGLE TRIP EXAMPLE			
# of Axles	8	A	User provided
Gross Weight	147,000	B	User provided
- Legal Weight	110,000	C	Staff provided
= Pounds Overweight	37,000	D	Staff provided
Tons Overweight	18.5	E	C - D = E
Rate per Ton/Mile	\$0.40	F	Policy
Miles (one-way, loaded)	15.00	G	User provided
Overweight Fee	\$111.00	H	$E \times F \times G = H$
Standard Permit Cost	\$20.00	I	Policy
Total Single Trip Permit Cost	\$131.00	J	H + I = J

To be Completed by MCHD Staff

MULTIPLE TRIP FEE: This fee is similar to the Single Trip Permit Fee but the number of months is used instead of miles traveled based on a route. Months will not be pro-rated. The Pounds Overweight will be determined and then a rate of \$8 per ton overweight per month will be assessed in addition to the standard permit fee of \$20.00. An example is shown below.

MULTIPLE TRIP EXAMPLE			
# of Months	4	A	User provided
# of Axles	8	B	User provided
Gross Weight	147,000	C	User provided
- Legal Weight	110,000	D	Staff provided
= Pounds Overweight	37,000	E	Staff provided
Tons Overweight	18.5	F	D - E = F
Rate per Ton/Month	\$8.00	G	Policy
Overweight Fee Cost	\$592.00	H	$A \times F \times G = H$
Standard Permit Cost	\$20.00	I	Policy
Total Multi-Trip Permit Cost	\$612.00	J	H + I = J

To be Completed by MCHD Staff

Note that in the above two examples of similar truck weights, the cost of the monthly permit is between 3 and 4 times that of a single trip. This was done intentionally to offer flexibility and make it more cost effective for users to purchase multiple trip permits when needed.

ANNUAL FEE: This fee is similar to the Multiple Trip Fee but no consideration is given to the number of months. Instead, Pounds Overweight is multiplied by \$32 per ton overweight per year. Annual permits shall be limited to the calendar year in which they were purchased with no carry-over into the following year. Therefore, it does not make sense to apply for an annual permit in the months of October thru December. An example of an Annual Overweight Permit fee calculation is shown below.

ANNUAL PERMIT EXAMPLE			
# of Months		A	
# of Axles	8	B	User provided
Gross Weight	147,000	C	User provided
- Legal Weight	110,000	D	Staff provided
= Pounds Overweight	37,000	E	Staff provided
Tons Overweight	18.5	F	D - E = F
Rate per Ton/Month	\$32.00	G	Policy
Overweight Fee Cost	\$592.00	H	A x F x G = H
Standard Permit Cost	\$20.00	I	Policy
Total Multi-Trip Permit Cost	\$612.00	J	H + I = J

To be Completed by MCHD Staff

Comparing the Multiple Trip and the Annual fee costs, it becomes apparent that if a heavy load requiring a permit is needed for more than four months, it is more cost effective to purchase an Annual Permit. This was intentional to offer flexibility and encourage the use of longer term permits when needed. This approach also reduces labor and paper work for highway users as well as county staff.

OVERSIZE PERMITS: If a highway user would need to acquire a state permit for their oversized load, a Minnehaha County Oversize permit would also be required. The fee is \$20 for this permit when the truck and/or truck-trailer combination exceeds legal widths or lengths or both. This is a one time fee and is good for the entire year in which the permit was granted. This permits the load length or width being over legal limits and does not permit any weights over legal allowable loads.

In all cases and for all the above listed permits, the following also applies:

- All vertical clearances shall be the responsibility of the permitted user.
- Motor Carrier Services will be conducting random checks of the claimed weights and measures as contained within the permit. Minnehaha County is not responsible to verify claimed weights and dimensions.
- Cash, in-state personal check, business check, cashier's check, money order, or credit card payments are acceptable.
- Permittee must observe all seasonal weight restrictions.
- Minnehaha County permits are only good on Minnehaha County Roads. Not valid on State and Township Roads.
- All permittees must observe **all** bridge postings and **all** spring load limit restrictions.
- NO oversized movement are allowed after sunset or prior to sunrise.
- NO mobile home movement when the winds exceed 25 MPH.
- All Permits covers only and exactly the EQUIPMENT listed within the permit.
- Damages to structures or other property within highway right-of-way shall be compensated for by the permitted user.