requirements may be specified whenever the size, speed, or operation of movement might require;

(H) Front escorts shall travel approximately three hundred feet (300’) in front of the load and rear escorts approximately three hundred feet (300’) to the rear of the load. In heavy traffic or when traveling within cities or towns, the escort vehicle should maintain a distance consistent with existing traffic conditions; and

(I) Flagging is required whenever the dimensions of overwidth loads are equal to or exceed the width of the traveled lane on two- (2-) lane bridges or whenever the movement is of such width or length that it infringes on the adjacent lane of traffic. The operator of the escort vehicle may act as the flagger. On shorter bridges it may not be necessary to actually stop traffic if sight distance is good, but on longer bridges or where sight distance is short, a flagger shall be used to direct traffic and be prepared to stop traffic, if necessary. A flagger is also required if the permitted vehicle and load must stop due to a breakdown with all or part infringing on the traveled roadway. Additional traffic control may be required for large complex moves. All traffic control devices shall meet the requirements listed in the Manual on Uniform Traffic Control Devices (MUTCD) which is incorporated herein by reference and made a part of this rule as published by the Federal Highway Administration (FHWA), 1200 New Jersey Ave., SE, Washington, DC 20590, revised May 2012. This rule does not incorporate any subsequent amendments or additions of this manual.

(10) Regulations for Oversize Permits. In addition to the regulations in sections (6), (9), (13), (14), (15), and (16), the following applies to all oversize permits:

(A) Red, yellow, or orange fluorescent flags in good condition with a minimum size of eighteen inches (18”) square shall be displayed at the extreme ends or projections of all overwidth and overlength loads, and all four (4) corners of manufactured and sectional home units. Oversize load signs at least seven feet (7’) long by eighteen inches (18”) high with ten-inch (10”) letters of one and five-eighths inch (1 5/8”) stroke shall be displayed front and rear for loads exceeding ten feet six inches (10’6”) in width on all highways. The oversize load sign may be split or otherwise configured to accommodate crash-avoidance technology. When the overall length of a combination unit exceeds ninety feet (90’) or the overall length of a single unit exceeds fifty feet (50’), an oversize load sign is required on the rear of the load. The sign’s background shall be yellow with black lettering. The legend for these signs shall read “OVERSIZE LOAD” or “WIDE LOAD;”

(B) Overlength permits shall be limited to a nonreducible vehicle and load with an overall length for a single unit not exceeding sixty feet (60’), for combination units not exceeding one hundred fifty feet (150’),
and truck-trailer combination units not exceeding seventy-five feet (75’). Steering mechanisms may be required on rear axles of combination units;

(C) Overheight permits for all movements will be limited to a nonreducible combination of vehicle and load height not exceeding the vertical clearance of the structures on the most feasible direct route between origin and destination. Arrangements for the raising or removal of overhead lines will be the responsibility of the permittee. It is also the responsibility of the permittee to check all structures and overhead wires for clearances before movement;

(D) The movement of noncommercial buildings exceeding routine special permit dimension limitations will be determined on an individual basis dependent on building size, roadway and structure width and clearances, traffic volumes, and other applicable factors. Permits for movement of such buildings shall be issued by the district offices (see section (16));

(E) Movement of farm products (hay) up to, but not exceeding, fourteen feet (14’) in width will be allowed by permit. These movements must comply with all existing Missouri oversize and overweight permit regulations except reference to reducible loads in subsection (1)(B) shall not apply. The hauling unit must be properly insured and licensed; and

(F) Night movement for hauling overwidth ten feet, six inches (10’6”) and hay fourteen feet (14’) in width will be allowed by single trip permit. Height and length must be legal. This movement will require a front and a rear escort on all two- (2-) lane and multi-lane undivided state highways. A rear escort is required on interstate and other dual lane divided state highways. Oversize load signs are required and shall be lighted or reflectorized. Clearance lights in lieu of flags shall be mounted at extreme ends or load projections when moving after daylight hours and/or when visibility is less than five hundred feet (500’). Continuous, uninterrupted two- (2-) way communication is required between the power unit and all escort vehicles. Movement is restricted for urban and tourist areas as outlined in subsections (9)(D) and (9)(E). Movement is restricted for holiday periods as outlined in subsection (1)(I).

(11) Regulations for Routine Overweight Permits. The following regulations apply to permit moves to transport nonreducible and nondivisible loads. See section (15) for super heavy and large load movement:

(A) Overweight permits may specify maximum and minimum speeds and method of vehicle operation to reduce hazards or control impact factors and load distribution on pavements and bridges. Overweight loads legal height and length, and not exceeding ten feet, six inches (10’6”) wide or the gross weight limit as listed in subsection (11)(D) will be granted day
and night movement except travel during holiday and holiday weekend periods as listed in section (1) and except for movement in tourist areas listed in subsection (9)(D). All movements authorized under overweight permits will be over specified routes on the state highway system only;

(B) Axles included in booster axle, tandem axle, triple axle, or quadrum axle groups on all hauling units shall be equipped with dual wheels or equivalent tread width. When configuring trailers for hauling units with seven (7) or more axles, conventional axles or booster axles may be used for the addition of the single axle, tandem axle, or triple axle groups that may be placed at the end of the trailer. Definitions—

1. The term “axle” shall mean a common axis of rotation of one (1) or more wheels whether power-driven or freely rotating, and regardless of the number of wheels carried thereon;

2. The term “axle group” shall mean an assembly of two (2) or more consecutive axles considered together in determining their combined load effect on pavement or structures. Axle groups must have a common equalization system, which will equalize the load between or among axles in both static and dynamic conditions. Any combination of mechanically equalized axles with either air suspension or any other suspension system used to form axle groups is not allowed;

3. The term “spread axles” shall mean two (2) axles, which are more than ninety-six inches (96”) apart and are considered single axles;

4. The term “tandem axle” shall mean a group of two (2) or more axles arranged one (1) behind another, where the distance between the extreme centers is more than forty inches (40”) and not more than ninety-six inches (96”) apart;

5. The term “triple axle or tridem” shall mean a group of three (3) axles, which are fully equalized automatically or mechanically and the distance between the centers of the extreme is more than ninety-six inches (96”) and not more than one hundred forty-four inches (144”);

6. The term “quadrum axle” shall mean a group of four (4) axles, which are fully equalized automatically or mechanically, and the distance between the centers of the extreme is not more than one hundred ninety-two inches (192”);

7. The term “lift axle” shall mean any axle designed with the capabilities of manipulation or adjustment of the weight on it or the axle group by use of manual valve(s). Under no circumstances will “lift axles” be recognized in weight computations. An additional axle may be added to an existing axle group provided:

A. All axles have a common equalization system; and
B. All equalization is accomplished with automatic valves; and

8. The term "booster axle" shall mean an extension of a hauling unit, which when attached to the trailer adds a single axle, tandem, or triple axle group. To be acceptable, a booster axle must connect to the vehicle frame in such a manner as to equalize the load between axles;

(C) The allowable combination configurations for overweight special permits are as follows:

**5-Axle Configurations**

- Single-Tandem-Tandem (1-2-2)
- Single-Tandem-Spread (1-2-2)

Minimum distance between the centers of the first and last axles is fifty-one feet (51').

Maximum gross weight allowed on a 5-axle configuration is one hundred four thousand (104,000) pounds.

**6-Axle Configurations**

- Single-Tandem-Triple (1-2-3)
- Single-Triple-Tandem (1-3-2)
- Single-Tandem-Tandem-Single (1-2-2-1) (Alternative Configuration)

Minimum distance between the centers of the first and last axle is sixty-five feet (65') for the alternative configuration and fifty-one feet (51') for all other configurations.

Maximum gross weight allowed on a 6-axle configuration is one hundred twenty thousand (120,000) pounds.

For the alternative configuration, the minimum distance between the tandem axle groups shall be twenty-five feet (25'), and the minimum distance between the tandem axle group and single booster axle shall be fourteen feet (14').

Lengths from forty-three feet (43') up to fifty-one feet (51') will be allowed for the (1-2-3) and (1-3-2) configurations provided that the maximum gross weight on these configurations does not exceed one hundred twelve thousand (112,000) pounds. When the configuration length is less than fifty-one feet (51'), the maximum gross weight on any tandem axle grouping shall be forty thousand (40,000) pounds and the maximum gross weight on any tridem axle grouping shall be sixty thousand (60,000) pounds.

**7-Axle Configurations**

- Single-Triple-Triple (1-3-3) (Routine Configuration)
- Single-Tandem-Quad (1-2-4) (Alternative Configuration)
- Single-Tandem-Triple-Single (1-2-3-1)
- Single-Triple-Tandem-Single (1-3-2-1)
Single-Tandem-Tandem-Tandem (1-2-2-2)

Minimum distance between the centers of the first and last axles is fifty-five feet (55’) for the routine configuration, seventy-five feet (75’) for the alternative configuration, and sixty-nine feet (69’) for all other configurations.

The following axle group spacing limitation will apply to all of the configurations as shown above, but will not apply to the steering axle. A minimum distance of fourteen feet (14’) shall be required between centers of adjacent axles on consecutive tandem, triple, and quad axle groupings and on single axles used in combination with these groupings.

Maximum gross weight allowed on a 7-axle configuration is one hundred thirty thousand (130,000) pounds for the alternative configuration, one hundred thirty-two thousand (132,000) pounds for the routine configuration, one hundred thirty-eight thousand (138,000) pounds for the 1-2-3-1 and 1-3-2-1 configurations, and one hundred fifty thousand (150,000) pounds for the 1-2-2-2 configuration.

8-Axle Configurations

- Single-Triple-Quad (1-3-4) (Routine Configuration)
- Single-Tandem-Tandem-Triple (1-2-2-3)
- Single-Triple-Triple-Triple (1-3-3-1)
- Single-Triple-Triple-Single (1-3-3-1) (Alternative Configuration)
- Single-Triple-Tandem-Tandem (1-3-2-2)
- Single-Tandem-Triple-Tandem (1-2-3-2)

Minimum distance between the centers of the first and last axle is sixty-one feet (61’) for the routine configuration and seventy-five feet (75’) for all other configurations.

The following axle group spacing limitation will apply to all of the configurations as shown above, but will not apply to the steering axle. A minimum distance of fourteen feet (14’) shall be required between centers of adjacent axles on consecutive tandem, triple, and quad axle groupings and on single axles used in combination with these groupings, except that a distance ranging from ten to fourteen feet (10’-14’) shall be required between centers of the last adjacent triple-single axle grouping for the alternative configuration.

Maximum gross weight allowed on an 8-axle configuration is one hundred forty-four thousand (144,000) pounds for the routine and alternative configurations and one hundred sixty thousand (160,000) pounds for all other configurations. For the alternative configuration, the maximum allowable weight will be twelve thousand (12,000) pounds for the last
single axle.

**9-Axle Configurations**

- Single-Triple-Tandem-Triple (1-3-2-3) (Routine Configuration)
- Single-Quad-Quad (1-4-4) (Alternative Configuration)
- Single-Double-Double-Quad (1-2-2-4) (Alternative Configuration 2)
- Single-Tandem-Triple-Triple (1-2-3-3)
- Single-Triple-Quad-Single (1-3-4-1)
- Single-Triple-Triple-Tandem (1-3-3-2)
- Single-Tandem-Tandem-Tandem-Tandem (1-2-2-2-2)
- Single-Tandem-Tandem-Tandem-Tandem-Tandem (1-2-2-2-3)

Minimum distance between the centers of the first and last axle is eighty-five feet (85’) for the alternative configuration 2 and seventy-five feet (75’) for all other configurations. The following axle group spacing limitation will apply to all of the configurations as shown above except for the alternative configuration and alternative configuration 2, but will not apply to the steering axle. A minimum of fourteen feet (14’) shall be required between centers of adjacent axles on consecutive tandem, triple, and quad axle groupings and on single axles used in combination with these groupings. When the alternative configuration is used, a minimum distance of thirty feet (30’) shall be required between centers of adjacent axles on the consecutive quad axle groupings. When the alternative configuration 2 is used, a minimum distance of thirty feet (30’) shall be required between centers of adjacent axles on consecutive tandem and quad axle groupings.

Maximum gross weight allowed on a 9-axle configuration is one hundred fifty-six thousand (156,000) pounds for the alternative configuration and one hundred sixty thousand (160,000) pounds for all other configurations.

**10-Axle Configurations**

- Single-Triple-Triple-Triple-Triple (1-3-3-3-3) (Routine Configuration)
- Single-Tandem-Tandem-Tandem-Triple-Triple (1-2-2-2-2-3)
- Single-Triple-Tandem-Tandem-Triple-Triple (1-3-2-2-2-2)
- Single-Tandem-Triple-Tandem-Triple-Triple (1-2-3-2-2-2)
- Single-Tandem-Tandem-Triple-Tandem-Triple (1-2-2-3-2-2)
- Single-Tandem-Tandem-Tandem-Tandem-Tandem (1-2-2-3-2-3)
- Single-Tandem-Tandem-Tandem-Tandem-Tandem-Tandem (1-2-2-3-3-3)
- Single-Tandem-Triple-Triple-Triple-Triple (1-2-3-3-3)
- Single-Triad-Triple-Triple-Triple-Triple-Triple (1-2-3-3-3-3)

The minimum distance between the centers of the first and last axle is eighty-five feet (85’) for all configurations.

The following axle group spacing limitation will apply to all of the configurations as shown above except for the routine configuration, but will not apply to the steering axle.

A minimum of fourteen feet (14’) shall be required between centers of adjacent axles on consecutive tandem axle groupings; consecutive
tandem and triple axle groupings; and consecutive triple axle groupings. A minimum distance of twenty feet (20’) shall be required between centers of adjacent axles on consecutive triple and quad axle groupings. When the routine configuration is used, a minimum distance of twenty feet (20’) shall be required between centers of adjacent axles on the consecutive triple axle groupings.

When possible, the distribution of the loading to the various axle groupings should be done in a manner to equalize the loadings to all of the axles on the entire configuration. When full equalization between the axles on the configuration is not possible, the gross weight variation between the individual axles (excluding the steering axle) on the entire configuration shall not be more than twenty-five percent (25%).

The maximum gross weight allowed on a 10-axle configuration is one hundred sixty thousand (160,000) pounds.

11-Axle Configurations

- Single-Tandem-Tandem-Triple-Triple (1-2-2-3-3)
- Single-Tandem-Triple-Tandem-Triple (1-2-3-2-3)
- Single-Triple-Tandem-Tandem-Triple (1-3-2-2-3)
- Single-Triple-Trio-Tandem-Tandem (1-3-3-2-2)
- Single-Triple-Tandem-Triple-Tandem (1-3-2-3-2)
- Single-Tandem-Triple-Triple-Tandem (1-2-3-3-2)
- Single-Triple-Triple-Quad (1-3-3-4)

The minimum distance between the centers of the first and last axle is eighty-five feet (85’) for all configurations.

The following axle group spacing limitation will apply to all of the configurations as shown above, but will not apply to the steering axle. A minimum distance of fourteen feet (14’) shall be required between centers of adjacent axles on consecutive tandem axle groupings; consecutive tandem and triple axle groupings; and consecutive triple axle groupings. A minimum distance of twenty feet (20’) shall be required between centers of adjacent axles on consecutive triple and quad axle groupings.

When possible, the distribution of the loading to the various axle groupings should be done in a manner to equalize the loadings to all of the axles on the entire configuration.

When full equalization between the axles on the configuration is not possible, the gross weight variation between the individual axles (excluding the steering axle) on the entire configuration shall not be more than twenty-five percent (25%).

The maximum gross weight allowed on an 11-axle configuration is one
hundred sixty thousand (160,000) pounds.

**12-Axle Configurations**

- Single-Tandem-Triple-Triple-Triple (1-2-3-3-3)
- Single-Triple-Tandem-Triple-Triple (1-3-2-3-3)
- Single-Triple-Triple-Tandem-Triple (1-3-3-2-3)
- Single-Triple-Triple-Triple-Tandem (1-3-3-3-2)
- Single-Triple-Quad-Quad (1-3-4-4)

The minimum distance between the centers of the first and last axle is eighty-five feet (85’) for all configurations.

The following axle group spacing limitation will apply to all of the configurations as shown above, but will not apply to the steering axle. A minimum distance of fourteen feet (14’) shall be required between centers of adjacent axles on consecutive tandem and triple axle groupings; and consecutive triple axle groupings. A minimum distance of twenty feet (20’) shall be required between centers of adjacent axles on consecutive triple and quad axle groupings. A minimum distance of thirty feet (30’) shall be required between centers of adjacent axles on the consecutive quad axle groupings.

When possible, the distribution of the loading to the various axle groupings should be done in a manner to equalize the loadings to all of the axles on the configuration.

When full equalization between the axles on the configuration is not possible, the gross weight variation between the individual axles (excluding the steering axle) on the entire configuration shall not be more than twenty-five percent (25%).

The maximum gross weight allowed on a 12-axle configuration is one hundred sixty thousand (160,000) pounds;

(D) The maximum allowable axle weights for permits are as follows:

1. Single axle—twenty thousand (20,000) pounds;
2. Tandem axle group—forty-six thousand (46,000) pounds, but not more than twenty-four thousand (24,000) pounds, for any axle of a multi-axle group;
3. Triple axle group—sixty thousand (60,000) pounds, but not more than twenty-one thousand (21,000) pounds, for any axle of a multi-axle group; and
4. Quadrum axle group—seventy-two thousand (72,000) pounds, but not more than nineteen thousand (19,000) pounds, for any axle of a quadrum axle group;
(E) Tractor trailer configurations with a maximum gross weight of one hundred sixty thousand (160,000) pounds or less that do not meet the length and weight restrictions outlined in subsections (11)(C) and (11)(D) may be considered for issuance as a routine overweight permit as long as they meet the length and weight criteria listed below and pass a bridge analysis for the structures located on the routes that the configuration will be traveling on.

1. The maximum allowable weight on a single axle that is not part of a group is twenty-two thousand four hundred (22,400) pounds.
2. The maximum allowable weight on a tandem axle group is forty-six thousand (46,000) pounds.
3. The maximum allowable weight on a triple axle group is sixty thousand (60,000) pounds.
4. The maximum allowable weight on a quadrum axle group is eighty thousand (80,000) pounds.
5. The minimum distance between the centers of the first and last axle of a 5-axle configuration is fifty feet (50').
6. The minimum distance between the centers of the first and last axle of a 6-axle configuration is fifty-five feet (55').
7. The minimum distance between the centers of the first and last axle of a 7-axle configuration is sixty feet (60').
8. The minimum distance between the centers of the first and last axle of an 8-axle configuration is sixty-five feet (65').
9. The minimum distance between the centers of the first and last axle of a 9-axle configuration is seventy feet (70').
10. The minimum distance between the centers of the first and last axle of a 10-axle, 11-axle, and 12-axle configuration is eighty feet (80').

(F) When it is necessary to move specialized equipment, such as mobile cranes, rock crushers, drilling equipment, or other equipment which cannot be reasonably reduced in weight to comply with legal weights, consideration shall be given for a special permit for these moves. The applicant must first give assurance that the unit has been reasonably reduced in weight and dimension (exclusive of attachments that are an intricate part necessary for the operation of the machine and/or machine adjustments necessary for weight distribution). After the weight has been reduced to a reasonable minimum, a special permit may be issued for weights not to exceed twenty thousand (20,000) pounds or legal weight on a single axle, forty thousand (40,000) pounds on a tandem axle, sixty thousand (60,000) pounds on a triple axle group, or sixty thousand (60,000) pounds on a quadrum axle group. Axle and axle groups are defined in subsection (11)(B); and