

Policy: 6120-8- Vehicle Routing Policy

Section: Bridges - Maintenance

Office/Department: 4Bridge and Structural Design

Reports To: 4Div Director Preconstruction

Contact: 404-631-1000

The Office of Maintenance advises the Office of Permits and Enforcement as to width, height and weight limitations of bridge structures. The policy guiding this office's recommendations concerning weight limitations as referenced to design loadings is contained in sections I through IV. The policies guiding widths in excess of 16'-0" and heights in excess of 13'-6" are covered in sections V and VI respectively.

I. Hauled Loads from 80,001 up to and including 150,000 pounds

This section involves rig configurations that are classified as "conventional" which is defined as a standard AASHTO truck or a combination of a tractor and trailer. This section is the responsibility of the Office of Permits and Enforcement.

A. AASHTO H 15 Design Loading Bridges with timber caps and timber piles (Trestle type) substructure:

Gross vehicle weight limited to 110,000 pounds on a minimum of 6 axles and a maximum loading axle weight of 23,000 pounds. The front or steering axle is assumed to carry 10,000 pounds.

B. AASHTO H 15 Design Loading Bridges other than Section I. A. above:

Gross vehicle weight limited to 135,000 pounds on a minimum of 7 axles and a maximum loading axle weight of 23,000 pounds. The front or steering axle is assumed to carry 10,000 pounds. The gross vehicle weight and minimum number of axles for Section I. B. is as follows:

- 80,001 up to and including 100,000 pounds = 5 axles min.
- 100,001 up to and including 125,000 pounds = 6 axles min.
- 125,001 up to and including 135,000 pounds = 7 axles min.

C. AASHTO HS 20 Design Loading Bridges

Gross vehicle weight limited to 150,000 pounds on a minimum of 8 axles and a maximum loading axle value of 23,000 pounds. The front or steering axle is assumed to carry 10,000 pounds. The gross vehicle weight and minimum number of axles for Section I. C. is as follows:

- 135,001 up to and including 148,000 pounds = 7 axles min.
- 148,001 up to and including 150,000 pounds = 8 axles min.

II. Hauled Loads from 150,001 up to and including 180,000 pounds

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Date Last Reviewed: 4/16/2019

This section involves rig configurations that are considered specialized. The different configurations are listed below. If a configuration does not meet the criteria listed below, it will be considered irregular and will require additional analysis. This section is the responsibility of the Office of Maintenance.

All rigs will be routed on AASHTO HS 20 Design Loading Bridges

A. For Loads with a gross vehicle weight from 150,001 up to and including 160,000 pounds:

1. 8 axles minimum.
2. 23,000 pounds per axle maximum. The front axle is assumed to carry 10,000 pounds.
3. Configuration must have a jeep or stinger (single or tandem axle) between last tractor axle and first trailer axle or after the last trailer axle. The distance or spread between these axle groupings must be equal to or greater than 10.0 feet.
4. No axle groupings of four axles or more.

**See Appendix "A" for standard configurations.*

B. For Loads with a gross vehicle weight from 160,001 up to and including 175,000 pounds:

1. 9 axles minimum.
2. 21,000 pounds per axle maximum. The steer axle is assumed to carry 10,000 pounds.
3. The outer bridge length from the steering axle to the last axle must be equal to or greater than 95.0 feet.
4. Configuration must have a spread of 10.0 feet or greater between the tractor drive and jeep axle groupings and between the trailer and stinger/booster axle groupings; similar to the west coast configuration: 3 or 4 axle tractor, tandem jeep, tandem trailer, and tandem booster.
5. No axle groupings of four axles or more.

**See Appendix "B" for standard configurations.*

C. For loads with a gross vehicle weight from 175,001 up to and including 180,000 pounds:

1. 10 axles minimum.
2. 21,000 pounds per axle maximum. The steer axle is assumed to carry 10,000 pounds.
3. The outer bridge length from the steering axle to the last axle must be equal to or greater than 95.0 feet.
4. Configuration must have a spread of 10.0 feet or greater between the tractor drive and jeep axle groupings and between the trailer and stinger/booster axle groupings; similar to the west coast configuration: 3 or 4 axle tractor, tandem jeep, tandem trailer, and tandem booster.
5. No axle groupings of four axles or more.

**See Appendix "C" for standard configurations.*

III. Special Loads

This section involves irregular rig configurations for loads over 150,000 pounds g.v.w. and specialized loads (west coast type rigs) over 180,000 pounds g.v.w. It is in the best interest of the State to minimize the deterioration of our roads and bridges while providing service to our customers. The use of rail to haul these loads is strongly advised and the Department will assist the hauler in completion of a route utilizing the closest rail siding. If movement by rail is not possible, the Office of Bridge Maintenance will adhere to the following guidelines in order to serve these requests:

- A. The hauler must submit the following information to the Office of Permits and Enforcement:
 1. The Hauler must give written notice to prove that the load or loads in question cannot be disassembled in any manner to make the load or loads as light as possible in accordance with Georgia law on dismantling. Also, the hauler must state why load cannot be transported by rail.
 2. Complete Permit Application.
 3. The Hauler shall submit a detailed configuration of the transport equipment that shall include but is not limited to the following:
 - a. Axle spacings
 - b. Axle weights
 - c. Tire size(s)
 - d. Gauge distances
 - e. Written description on how the load will be distributed equally to each axle.
 - f. Written description on the size and dimensions of the hydraulic system(if used), including the total stroke for each cylinder.
 - g. Model and make of each piece of equipment used in the configuration.

Note: Parts c. through g. are required for all loads greater than 180,000 pounds g.v.w.
- B. The proposed route on the permit application shall be first evaluated for HS-20 design structures. Also the route must satisfy horizontal and vertical clearance requirement, see Sections V and VI respectively.
- C. For loads hauled on irregular rig configuration with a gross vehicle weight over 150,000 pounds up to 180,000 pounds:
 1. The Department will analyze the load on a database of selected structures throughout the Interstate and State systems.
 2. The engineer will check the structural adequacy of each bridge for the given loading based on current parameters as established by the Office of Bridge Maintenance.
 3. If the load passes all checks, as mentioned above, then a single trip permit will be issued based on that investigation. This information may be retained for future moves however; it will not necessarily be used to establish a standard.
 4. If the load does not pass the checks, then the permit request will be denied.
 5. The Office of Bridge Maintenance will evaluate these requests and respond to the applicant within 5 business days from the date of the application.

Notes:

- 1) The maximum individual axle weight shall be limited to 21,000 pounds.
- 2) The maximum load on a grouping of 3 or more axles shall be limited to 63,000 pounds. (Quads are not recognized on vehicles weighing over 150,000 pounds).

D. For special loads over 180,000 pounds g.v.w. on typical west coast type rigs, which meet the following criteria:

1. The Department will analyze the load on a database of selected structures throughout the Interstate and State systems.
2. The engineer will check the structural adequacy of each bridge for the given loading based on current parameters as established by the Office of Bridge Maintenance.
3. If the load passes all checks, as mentioned above, then approval from the Chief Engineer shall be requested from the Office of Bridge Maintenance.
4. If the load does not pass the checks, then the permit request will be denied.
5. If given approval from the Chief Engineer, a single trip permit will be issued based on this investigation. This information may be retained for future moves however; it will not necessarily be used to establish a standard.
6. The hauler will be required to cross each bridge structure along the route in a manner as to minimize the load effects. This may be accomplished by crossing each structure at a speed of 5 m.p.h. or less with no braking or changing of gears while on the structure. In this situation, police escorts shall be required because Georgia Law requires only law enforcement officials to stop traffic.
7. The Office of Bridge Maintenance will evaluate these requests and respond to the applicant within 5 business days from the date of the application.

Notes:

- 1) The maximum individual axle weight shall be limited to 21,000 pounds.
- 2) The maximum load on a grouping of 3 or more axles shall be limited to 63,000 pounds. (Quads are not recognized on vehicles weighing over 150,000 pounds).

E. For special loads meeting the above requirements but requiring special attention due to the dimensions of the load as in excessive length or width shall meet the following:

1. Traffic Control Plan - this plan shall include but not be limited to the following:
 - a. Traffic control details at all interchanges and railroad crossings.
 - b. Provide any conflicting vertical and / or horizontal clearances with any fixed object including overhead utilities, traffic signal heads, signs, etc.
 - c. An estimated travel time from interchange to interchange on the proposed route. On state and local routes this will also include an estimated travel time from major intersections to major intersections.
 - d. Intermediate stop points and / or overnight parking on the proposed route.
 - e. Refueling points.
 - f. Relief points for the traveling public.

- g. Safety plan including what items backup vehicles will be carrying in the event of a breakdown (lights, signs, flares, spare tires, etc.).
- h. Provide an alternate primary mover truck in the event of a breakdown.
- i. Illuminate the load for night time movement.
- j. Overnight parking on Department Right-of-Way will be prohibited.
- k. The number of required copies of the Traffic Control Plan will be determined by the Office of Traffic Operations.

2. Field Survey - this survey shall:

- a. Traverse the route from the origin of the move proceeding to the final destination.
- b. Provide photographs chronologically throughout the proposed route showing:
 - All changes in roadway typical sections.
 - Any obstructions or conflicts (horizontal and/or vertical clearance, turning radius, etc).
 - All traffic control concerns as stated in traffic control plan.
- c. Describe the route in detail and in conjunction with all photographs.
- d. The number of required copies of the Traffic Control Plan will be determined by the Office of Traffic Operations.

3. Other Special Concerns - the following remaining concerns shall be addressed in either the Traffic Control Plan, Field Survey or by separate letter:

- a. It shall be the responsibility of the Hauler to provide written proof of having contacted any railroad personnel (at the division level), whose right of way they are traversing on the proposed move. It shall also be the responsibility of the Hauler to provide written agreed compliance with any requirements set by the Railroad whose right of way they are traversing while in the process of this move.
- b. It shall be the responsibility of the Hauler to notify all Emergency Services and media outlets on the proposed route. A listing of all Emergency Services and media contacts, with phone numbers, shall be submitted to the Department.
- c. No movement will be allowed on holidays or special events as determined by the Department.
- d. The hauler must be able to make contact with the Transportation Management Center in Atlanta by use of a telephone as required by the Department.
- e. Provide police escorts as required by the Department.
- f. Provide portable variable message sign(s) to be pulled by rear escort vehicle(s).
- g. The Hauler shall follow any travel time restrictions imposed by the Department.
- h. The Hauler shall be responsible for all costs for repairs of any damage that occurs as a result of the superload move or moves. Designs, construction plans and specifications of such repairs shall be performed and submitted to the Department for review and approval by a Professional Engineer who is registered in the State of Georgia. After all corrections have been made, the engineer shall submit one (1) set of reproducible originals of the construction plans.

- i. Prior to issuing the permit, the Hauler shall provide adequate bond (minimum of \$3,000,000) to protect all items maintained by the Department. The amount set by the Department will be whatever is deemed necessary to cover each permit.
- F. Ownership of Documents - All documents including reports, letters and computer files submitted to the Department shall become and remain the property of the Department upon termination or completion of the work. The Department shall have the right to use the same without restriction or limitation and without compensation.
- G. Review Period - Upon submission of the Traffic Control Plan or Field Survey, the Department shall have a period of not less than thirty (30) business days from the date received to review and respond in writing.
- H. Issuing of Permit(s) - If all of the above conditions of Section III are deemed satisfactory, then the Department's Chief Engineer will be consulted for final approval. If any one of the conditions of section III are deemed unsatisfactory, then the special load will be denied.

IV. Self-propelled Vehicles

A. Scrapers

- 1. Axle weights in excess of 23,000 pounds are not allowed on bridge structures.
- 2. Axle weights 23,000 pounds or less, 10 mile limit on move; no route required.

B. Cranes

- 1. Four axle Cranes - maximum axle weight of 23,000 pounds; no route required.
- 2. Five axle Cranes - maximum axle weight of 23,000 pounds. Maximum gross vehicle weight of 115,000 pounds. Prefer a route with HS 20 design load bridges. Require a route with H 15 design load bridges, but excludes those with timber cap and timber pile (trestle type) substructure.
- 3. Six or more axle Cranes - maximum axle weight of 23,000 pounds. The following are the maximum gross vehicle weights and axles:
 - Six axle cranes - maximum 138,000 pounds
 - Seven axles or greater - maximum 150,000 pounds

All cranes with six axles or more require a route with HS 20 design load bridges.

C. Military Vehicles

On occasion the Office of Maintenance is asked to investigate a route for a self-propelled military tank or a self-propelled military recovery vehicle, etc. This Office's recommendations are based on engineering judgement and the condition of the structures.

As a general rule, if the route does not cross any bridge structures, then the request should be approved through standard procedures. Otherwise, unless the request is deemed a national emergency, tank movements are not

permitted. If the request is deemed a national emergency, the following restrictions would apply to any structure on an approved route:

1. Speed less than 5 mph.
2. Straddle centerline of structure.
3. Only the primary vehicle on a structure while crossing.

V. Hauled Loads with Widths greater than 16'-0"

This section is the responsibility of the Office of Permits and Enforcement.

- A. When a permit request for a load whose width is greater than 16'-0" is submitted, the following additional information is required:
 1. The request shall include a letter from the proposed Hauler explaining why the load width cannot be reduced to 16'-0" or less.
 2. A drawing of the load configuration on the vehicle used for transporting shall be submitted. The drawing shall show a side view and rear view of the load with dimension details.
 3. A completed permit application which also indicates a proposed route of travel.
- B. The permit request will be reviewed by the Office of Permits and Enforcement and a route check will be performed to confirm the clearances on the requested route. The route must allow for the free and safe movement of the width requested.
- C. If the route is cleared, the permit request package will be submitted to the Director of Operations for further review.
- D. If the request is denied, the Hauler will be notified of the Department's decision.
- E. If the request is approved, the Hauler may be asked to submit a traffic plan as covered in Section III, E. 1. and 2. of this policy. Also the Hauler will be responsible for addressing all the requirements covered in Section III: E. 3, F, G, and H.

VI. Hauled Loads with a vertical clearance greater than 13'-6"

- A. Loads greater than 13'-6" and less than 18'-0" in height:
 1. The request for such loads shall include a letter from the proposed Hauler explaining why the load cannot be reduced vertically.
 2. The Hauler must submit an application with an accurate measured height. Also, the Hauler must submit a proposed route that will transport the load safely under all obstructions.
 3. The route will be reviewed to determine if the safest route was proposed. If the proposed route is deemed unsafe, then a new route will have to be reviewed. For the safety of the traveling public and any obstructions, the Department has at minimum 15 business days to review and respond on a new route. It is the Hauler's

responsibility to survey the new route to ensure the load will clear all obstructions.

B. Loads equal to or greater than 18'-0":

1. The Hauler must call the Office of Permits and Enforcement's customer service number at 1-888-262-8306 to request information concerning the Georgia Utility Coordinating Council. The Hauler must have approval from all utility companies prior to issuing the permit. The coordinator of each County in which the move will occur shall be contacted. In turn, the coordinator should contact the Department informing us if the route has been surveyed and approved or denied.
2. The request for such loads shall include a letter from the manufacturer explaining why the load cannot be reduced vertically.
3. The Hauler must submit an application with an accurate measured height. Also, the Hauler must submit a proposed route that will transport the load safely under all obstructions.
4. The route will be reviewed to determine if the safest route was proposed. If the proposed route is deemed unsafe, then a new route will have to be reviewed. For the safety of the traveling public and any obstructions along the route, the Department has a minimum of 15 business days to review and respond on a new route. It is the Hauler's responsibility to survey the new route to ensure the load will clear all obstructions.

References:

None.

History:

annual review: 04/16/19;

updated logo: 11/01/18;

revised, added to TOPPS, and transferred to Maintenance Office section: 08/27/96;

added to Manual of Guidance: 05/23/88

Reviewed: 4/16/2019