

Newport/Pell Bridge Application for Overweight Vehicle Crossing Guidelines for Applications January, 2011

Evaluation of Trucks for Overweight Vehicle Crossing Permit Application Consideration

The general bridge live load capacity is determined based on standard trucks that are assumed to be making unlimited crossings. The general bridge live load capacity also considers the possibility of multiple trucks being present adjacent to each other across the four lanes of the roadway and the possibility of multiple trucks traveling close together within a lane. This standard live load is applied and evaluated in accordance with the American Association of State Highway Officials Standard Specifications for Highway Bridges (AASHTO) to determine the general live load capacity of the bridge.

Overweight vehicles are evaluated separately from the evaluation of the general bridge live load capacity. The effects of overweight vehicles on the bridge are evaluated against a higher allowable load, as per AASHTO, under the assumption that the vehicle will be making infrequent crossings. In the case of the heaviest overweight vehicles, evaluations are made with no other live load adjacent to the vehicle and with decreased impact effects. In these cases, permits may be issued with the provision that the overweight vehicle crosses the bridge with escorts that keep other traffic 500 feet behind and with a 10 MPH speed restriction.

There are currently repairs being performed to some of the deck supports on the Newport/Pell Bridge and until these repairs are completed there is a reduction in the capacity to accommodate some overload vehicles.

The guidelines below are intended to aid in the preparation of Overweight Vehicle Permit applications. Some information on axle load and spacing limitations is included to aid trucking companies in portioning loads and carriers in configurations that meet the requirements to obtain an Overweight Vehicle Crossing Permit from the RITBA for the Newport/Pell Bridge. However, each application is unique and must be examined individually.

Guidelines for Application for Overweight Vehicle Crossing

1. Prior to a scheduled crossing, an application must be submitted for all overweight vehicles using an Application for Overweight Vehicle Crossing. The application must be submitted to the RITBA a minimum of 3 business days prior to the scheduled crossing.
2. Applications can be downloaded from the RITBA website at www.ritba.org or faxed to the requesting party after contact is made to the RITBA business office at (401) 423-0800.
3. Completed applications should be faxed to the RITBA business office at (401)-423-0830.
4. The RITBA will review the application, and if the application is approved, set forth the toll to be paid based on the weight, and identify whether an escort or other special crossing conditions are required (maximum travel speed, travel lane to be used, timing of crossing, etc.).
5. If the evaluation of the loads and axle configuration identifies that the application cannot be approved, the RITBA will advise the applicant. The applicant may submit a revised application with reduced axle loads and/or changes in axle configurations for consideration by the RITBA.
6. If an escort is required by the RITBA for the crossing, the escort must be provided and coordinated by the applicant.

7. The overweight vehicle will require assistance at the toll plaza prior to crossing and should stop at the far right lane of the toll plaza. The toll will be collected and the bridge employee will designate a lane for passing through the toll plaza.

Guidelines for Newport/Pell Bridge Axle Loads and Configuration Limitations for Overweight Vehicle Crossing Applications

The governing effects of vehicles on the bridge are the axle loads, the spacing of the axles, and the number of axles spaced closely together (axle groups). Therefore, a heavier gross weight vehicle with more axles may be within the capacity of governing bridge elements, whereas a lighter vehicle with fewer axles may not be. The axle configuration is therefore always required with the overload permit application. Impact loads of the vehicle (associated with the speed of travel) and the proximity of other live load on the bridge are also significant factors to be considered. Heavier axle loads can be permitted to cross the bridge under restrictions on speed and isolation from other live loads through the use of escorts.

Guidelines for common axle groups that identify the maximum axle load for the number of axles at a given spacing in the form of sketches and tables are provided for use in the preparation of Overweight Vehicle Crossing Permit applications. The maximum axle loads indicated on these sketches and tables are based on the reduced capacity of some of the roadway support elements that are currently under repair. The tables include a column that indicates the maximum axle load for an escorted vehicle keeping traffic 500 feet behind and traveling at a maximum speed of 10 MPH and a column for maximum axle loads for an unescorted vehicle traveling at the posted speed limit of 40 MPH. These sketches and tables are intended as a guideline only to aid applicants in portioning their loads and carriers in configurations that meet the requirements to obtain an Overweight Vehicle Crossing Permit from the RITBA for the Newport/Pell Bridge. However, each application is unique and must be examined individually by the RITBA before approval.

NEWPORT/PELL BRIDGE OVERWEIGHT VEHICLE CROSSING APPLICATION
GUIDE TO MAXIMUM ALLOWABLE AXLE CONFIGURATIONS
January, 2011

1. Maximum single axle of 32,000 Pounds
2. Maximum total load per 20'-0" of vehicle length = 84,000 Pounds
3. For maximum axle loads for sample axle groups see Tables 1 through 3
4. Escorted vehicles keep other traffic 500 feet behind the overweight vehicle and restrict the crossing speed to 10 MPH
5. Each permit application is unique and needs to be evaluated individually


TABLE 1 - TWO AXLE GROUP LIMITATIONS No other axles within 15'-0"			
	Axle Spacing X	Maximum Axle Load P Escorted Vehicle Traveling at 10 MPH (Pounds)	Maximum Axle Load P Unescorted Vehicle Taveling at 40 MPH (Pounds)
 <p>Axle group with two axles spaced "X" feet apart and no other axle within 15 feet.</p>	4'-0"	23,500	22,000
	4'-6"	24,000	23,000
	5'-0"	26,000	23,500
	5'-6"	26,500	24,000
	6'-0"	27,000	24,500
	7'-0"	28,000	25,000
	8'-0" to 13'-0"	29,000	26,000
	14'-0"	N/A	32,000

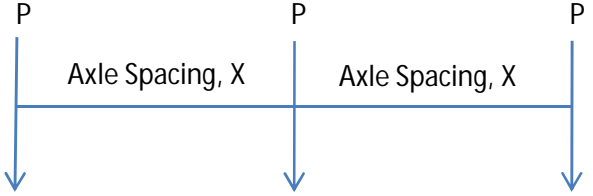

TABLE 2 - THREE AXLE GROUP LIMITATIONS No other axles within 10'-0"			
	Axle Spacing X	Maximum Axle Load P Escorted Vehicle Traveling at 10 MPH (Pounds)	Maximum Axle Load P Unescorted Vehicle Taveling at 40 MPH (Pounds)
 <p>Axle group with three axles at "X" feet spacing and no other axle within 10 feet.</p>	4'-0"	18,500	17,000
	4'-6"	19,000	18,000
	5'-0"	20,500	18,500
	5'-6"	21,500	19,000
	6'-0"	22,500	19,500
	6'-6"	23,000	20,000
	7'-0"	24,000	21,000
	7'-6"	25,000	22,000
	8'-0" to 13'-0"	26,000	23,000
	14'-0"	N/A	32,000

TABLE 3 - FOUR AXLE GROUP LIMITATIONS No other axles within 8'-0"			
	Axle Spacing X	Maximum Axle Load P Escorted Vehicle Traveling at 10 MPH (Pounds)	Maximum Axle Load P Unescorted Vehicle Taveling at 40 MPH (Pounds)
 <p>Axle group with four axles at "X" feet spacing and no other axle within 8 feet.</p>	4'-0"	16,000	14,000
	4'-6"	17,000	15,000
	5'-0"	18,000	16,000
	5'-6"	20,000	17,000
	6'-0"	21,000	18,000