Request for Research Funding for FY 2020-2021			
Requesting Office	State Materials Office (SMO)	**Priority**	SMO 5 / 10
Proposed Title	Impact of Increased Allowable Truck Loads on Pavement Life		
Justification	Research is needed to investigate the impact of increased truck loads on pavement performance. Observations suggest that pavements subjected to a high volume of truck traffic with increased loads have exhibited accelerated rates of rutting and cracking. The research will provide the following: 1) define corridors that will most likely be impacted by future increased loads truck volume and 2) quantify the effect of further increased loads should they be allowed. The impact will be assessed in terms of increased pavement damage assuming no change in pavement structure and the cost of more substantial pavement structures that must be implemented to handle future additional loads.		
Impact	As demand for moving goods increase, the pressure to raise allowable axle loads and overall truck loads will also increase. This research will provide pavement designers with expected pavement life as well as recommended design alternatives required to counter future increased loads should they be allowed. It is anticipated the research will consist of mostly modeling pavement damage and life using existing pavement design methods. With better understanding of the impact of increased truck loads and volume, the Department can more effectively manage pavements, provide proper maintenance, and apply appropriate rehabilitation and design strategies.		
Affected Offices	Materials, Maintenance, Design		
Existing Work	BE695 is an ongoing project to provide guidance to legislators and the Department that can be used to plan for infrastructure maintenance budgets, as justifications for modifications to the current fee structure of permits and licenses for overweight transports, and to assign fair costs to the vehicle types used in this study. The above research does not specifically address pavement life and damage associated with increased allowable truck loads.		
Keywords Used In Existing Work Search **(Cannot leave blank)**	Pavement damage, pavement life, increased truck loads		
Related Contracts (Give contract numbers)	BE695 (see above)		
Funding Request	$150,000	**Anticipated Duration**	18 months
Project Manager	TBD	**Contracting Method**	RFP
Urgency	Score 1-5 1= highest, most immediate need	3: This research provides pavement designers information on expected pavement damage should an increase in truck loads be allowed. Corridors where increased truck loads and volumes are most likely to occur will also be identified. This information is critical to pavement designers to ensure appropriate management and design strategies are considered.	
Implementability	Score 1-5 1=greatest likelihood of and proximity to implementing results	2: This research will provide guidance for pavement designers regarding the impact of increased truck loads on pavement life.	

Project Benefits (Succinct, complete explanation)

This project will identify corridors most impacted by current and potential future increased truck loads. Pavement designers can use this research to assess the impact of increased loads on pavement life; particularly should allowable truck loads be increased in the future.

Project Benefits **(Select all that apply and explain)**	**Quantifiable Benefits (units, dollars, etc…if applicable)**	**Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits**
o Materials Enhancement	NA	
o Materials Savings	N/A	
o Time Savings	Longer rehabilitation cycles, timely planning information	The research will provide information on expected increases in pavement damage should truck loads be raised in the future. In addition, information on the impact of increased truck loads will be quantified in terms of pavement damage and cost of more substantial pavement structures. This information will be critical to pavement designers, maintenance, and other offices.
o Lives Saved/Injuries Prevented	N/A	
o Other (Explain)		

*Comments should explain and support urgency, financial benefit, and implementability scores