

Project Title:	Non-proprietary Large Sign Supports
Project Synopsis:	<p><i>DOT's are using non-proprietary wood and steel-I-beam supports with slip bases to support large ground mounted guide signs and need assistance in determining if these designs may continue to be used and in evaluating if they will meet the new MASH testing requirements. Sign supports of different shapes, materials and spacing should be considered. It is specifically requested that closely spaced sign supports (< 6' spacing) are tested.</i></p>
Project Goal(s):	<ol style="list-style-type: none"> 1. Provide clarification to state DOT's regarding the limits of the continued use of sign supports which meet NCHRP 350 after December 31st, 2019 and what analysis is needed to justify their continued use. 2. Determine if large sign supports of different shapes, materials and spacing can meet MASH test requirements. It is specifically requested that closely spaced sign supports (< 6' spacing) are tested
Project Background:	<p><i>Many DOTs use a non-proprietary steel-I-beam support design for all large ground mounted extruded panel type signs. It is assumed these designs meet NCHRP 350 test criteria but not MASH.</i></p> <p><i>Per FHWA (Federal Register) Docket No. FHWA-2015-0008: The NCHRP 350-tested devices remain eligible for Federal-aid funding. The FHWA will not withdraw an existing Federal-aid eligibility letter for a product that currently meets NCHRP Report 350 criteria. The proposed deadline does not prevent a manufacturer from modifying a device, does not impose any requirements for the installation of MASH-tested devices, nor does it prevent a State DOT from installing a device previously tested to the NCHRP 350 criteria. The proposed deadline only applies to those seeking a Federal-aid eligibility letter for a modified device previously tested to NCHRP 350 criteria. It will be the States' responsibility to determine if all future proposed modifications made to existing 350 devices comply with NCHRP Report 350 criteria.</i></p> <p><i>DOT's request clarification on the above statement RE: Can DOT's continue to use current NCHRP 350 compliant non-proprietary steel-I-beam supports and if not what steps need to be taken to continue their use?</i></p> <p><i>If the use of the subject sign supports cannot be continued starting in January of 2020, will the subject post be considered non-crashworthy and if yes, will projects already let and bid have to be changed to MASH compliant sign supports?</i></p> <p><i>Either way, large ground mounted sign supports have not been crash tested under the MASH criteria and it is requested that the performance of such supports is researched acknowledging the MASH criteria.</i></p> <p><i>In addition, it is desired to test the effects of two closely spaced supports under the MASH criteria. Situations exist where multiple closely spaced (< 6') supports support a single sign. By having the supports spaced less than 6' apart, there is a chance that a vehicle may strike both posts during a collision; therefore, it is desired to test a vehicle striking two supports.</i></p>

<p>Proposed Work Plan:</p>	<p>The proposed work plan includes the following tasks:</p> <ul style="list-style-type: none"> • Literature Review • Engineering Analysis • MASH TL-3 Crash Testing • Final Report
<p>Deliverables:</p>	<p>Provide clarification on limits of DOT's to continue to use NCHRP 350 compliant non-proprietary steel-I-beam supports.</p> <p>Provide analysis and any needed testing on the subject designs.</p>
<p>Urgency and Expected Benefit:</p>	<p><i>Based on guidance from FHWA all sign supports must meet MASH after December 31st, 2019. The inability to continue use of NCHRP 350 compliant supports will have significant adverse impacts to numerous let contracts and substantial cost to the DOT.</i></p>
<p>Problem Funding and Research Period:</p>	<p><i>Please describe what are the estimated costs and time to complete the project</i></p> <p>The estimated costs to complete the proposed project is \$100,000. Estimated time to complete the project is 12 months.</p>
<p>Developer(s) of the Problem Statement:</p>	<p>TN DOT: Name: Joseph Sweat / Eric Jackson / Ali Hangul Email: Joseph.Sweat@tn.gov / Eric.Jackson@tn.gov / Ali.Hangul@tn.gov Phone: 615-532-3431 / 615-741-0802 / 615-741-0804</p> <p>MassDOT: Name: Corey O'Connor / James Danila Email: Corey.OConnor@dot.state.ma.us / James.Danila@dot.state.ma.us Phone: 857-368-9638 / 857-368-9640</p>