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| Project Title: | MASH Evaluation of Wood Sign Support Systems (2024-05-BD) |
| Project Synopsis: | <p>Develop criteria for single and multiple wood sign supports for small to medium sign sizes used for permanent and temporary applications. This project will review existing literature, determine applicable wood species and grades, determine installation details, and perform MASH crash testing.</p> |
| Project Goal(s): | <p>1.) Evaluate the MASH crashworthy performance of breakaway wood sign supports. Consider 4"x4", 4"x6", 6"x6", and 6"x8" post sizes. Also, consider Douglas Fir, Western Hemlock or other wood species that can be alternatives to Southern Yellow Pine. If needed, develop design modifications to improve crashworthy performance.</p> |
| Project Background: | <p>Wood sign support systems have been successfully used for many years that include drilled weakening holes. Wood posts were successfully tested under NCHRP Report 350.</p> <p>Wood posts are a useful alternative to steel posts and are used for temporary and permanent applications by DOTs, Cities, Counties, and the US Forest Service.</p> <p>Oregon DOT uses the below linked details for wood post sign support systems. https://www.oregon.gov/ODOT/Engineering/202301/TM670.pdf</p> <p>Recent MASH testing of single 4" x 4" wood sign posts and multiple 4"x4" wood sign posts have failed due to occupant compartment penetration. Alternative design applications such as different wood species, grades, and a hinge below the sign with two drilled holes has not yet been considered.</p> |
| Proposed Work Plan: | |
| Deliverables: | |
| Urgency and Expected Benefit: | <p>Wood post material is a common, available material for sign supports. Maintenance crews can replace damaged wood sign posts with minimal engineering support. Cost of wood posts is competitive with other sign post options for medium-sized signs.</p> |

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| Problem Funding and Research Period: | Total Estimated Cost = \$XX,XXX |
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