

Research Stage 1 Problem Statement

PROPOSED TITLE: Building a Framework for Medium-Duty CMV Safety and Education: Strategies for Improved Compliance through Outreach

1. Concisely describe the transportation issue (including problems, improvements, or untested solutions) that Oregon needs to research.

While prior research (SPR 846)¹ analyzed crash and fleet data for medium-duty commercial motor vehicles (10,001–26,000 lbs.), there remains limited understanding of the behavioral, educational, and awareness factors influencing safety and compliance in this segment. These carriers often fall outside traditional enforcement and outreach efforts, despite representing a large portion of Oregon’s commercial vehicle population. This project seeks to identify the knowledge, attitudes, and practices of operators and carriers within this group and evaluate how awareness of safety requirements, available resources, and regulatory expectations affects compliance behavior. Understanding these gaps will help ODOT’s Commerce and Compliance Division (CCD) to design more effective educational programs, outreach strategies, and policies that aim to improve safety performance and compliance among medium-duty CMV operators.

2. What final product or information needs to be produced to enable this research to be implemented?

This research will produce a practical framework and implementation plan that supports CCD’s efforts to improve medium-duty commercial motor vehicle safety through education, outreach, and data-informed engagement. The final deliverables will include: (1) survey-based insights from carriers and operators that identify gaps in knowledge, training, and compliance behavior; (2) a synthesis of best practices from other states and industries; and (3) a set of targeted recommendations for outreach materials, training modules, and policy enhancements. Together, these outputs will provide CCD with the tools needed to better connect with the 10–26k lb. carrier population, improve safety culture and compliance, and inform future enforcement and educational initiatives.

3. (Optional) Are there any individuals in Oregon who will be instrumental to the success of implementing any solution that is identified by this research? If so, please list them below.

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¹ Hernandez, S., Velasquez, B., Ghosh, S., Figliozi, M., Bronson, M. and Semensky, S., 2025. *Trends and Challenges Posed by Medium-Duty Trucks to the Oregon Freight System*. FHWA-OR-RD-25-05, SPR-846. Oregon Department of Transportation, Salem, OR

Ryan Sone	Transportation Safety Analyst	Ryan.STONE@odot.oregon.gov	971-345-7141
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4. Other comments:

The proposed research will build on the findings of ODOT's previous study, *Trends and Challenges Posed by Medium-Duty Trucks to the Oregon Freight System (SPR 846)*, by addressing the behavioral and educational dimensions of safety and compliance among commercial motor vehicle (CMV) carriers operating between 10,001 and 26,000 pounds. Whereas SPR 846 focused primarily on quantitative crash, fleet, and operational data, this new project will explore the human and organizational factors influencing safety outcomes within this segment. Many medium-duty carriers operate small businesses or service fleets that are not consistently reached through traditional compliance channels, creating gaps in awareness of safety requirements and available resources.

The research will be structured around several key tasks: (1) conducting a literature review and national scan of safety outreach and compliance education programs for medium-duty carriers; (2) developing and administering a statewide survey to assess operator and carrier knowledge, perceptions, and barriers to compliance; (3) integrating survey insights with existing CCD safety and enforcement data to identify behavioral patterns and awareness gaps; and (4) developing targeted strategies and educational materials to address identified needs. Deliverables will include a comprehensive report, outreach toolkit, and implementation framework to guide CCD's engagement with this underrepresented carrier group.

This project directly supports ODOT's goals to improve roadway safety and compliance through education, data-driven decision-making, and stakeholder collaboration. By enhancing understanding of how medium-duty operators perceive and manage safety responsibilities, ODOT's Commerce and Compliance Division will be better equipped to tailor outreach, policy, and training initiatives that promote safer operations and consistent compliance across all vehicle weight classes. The results will provide both immediate practical value and a foundation for future safety and education initiatives within Oregon's commercial vehicle network.

5. State of Oregon Decision Making Lenses

State decision making lenses are a part of the state of Oregon's policy structure. State policy and federal policy are not always aligned. The state will prioritize research according to state policy, however ODOT may be required to skip prioritized proposals based on constraints placed on the use of federal funds. If state funds are available ODOT will attempt to fund prioritized research that is deemed ineligible for federal funding.

Please complete the following three sections. Your answers to these questions will be applied on a programmatic basis to support agency decisions. Answering yes to the questions below is not required. Resolving a narrowly focused technical research problem may meet agency needs without answering yes to any of the following questions. The ODOT Research Section will seek a balanced portfolio some projects will answer yes to one of the three categories below (e.g. climate, equity, and/ or safety) and other projects in a different category.

We are looking for an overall program balance and no one project is expected to balance all categories. Generally, a research problem statement is expected to be able to answer yes with clear and verifiable

information in only one of the three categories below, some projects may be able to answer yes in two or even three categories. Some projects (i.e. needs focused on specific elements of infrastructure design), may have no 'yes' answers but may still be a high value research need.

Climate

Oregon recognizes the climate crisis and makes systemic changes to reduce emissions caused by travel. To that end, we seek research that reduces carbon emissions from construction activities and materials, and from maintenance equipment and operations. Oregon envisions a transportation system that is resilient, this means a system that is durable in the face of seismic events and extreme weather to avoid negative impacts, withstand them or bounce back quickly to resume system function. We seek research that improves the ability of the transportation system to adapt or cope with more frequent and extreme weather events. This may include innovations in data and data sharing, construction materials and project design, communication, emergency planning and response, and more. Similarly, we seek research that avoids negative impacts on key habitats and ecosystems that can buffer or reduce damage to infrastructure and improve environmental conditions for wildlife and native vegetation. For definitions and details please review the equity vision, goals, and objectives of the [ODOT Strategic Action Plan](#) and [Oregon Transportation Plan](#).

5a. Will addressing the transportation issue identified as a need in Question 1 develop, or **validate methods for the estimation, measurement, or monitoring** of transportation generated greenhouse gases (GHG)?

☐ Yes

☒ No

☐ Unsure

5b. If climate or GHG is not the focus of this **transportation issue** identified in this problem statement, will the research apply a GHG analysis to transportation infrastructure, planning, operations, maintenance, or materials?

☐ Yes

☒ No

☐ Unsure

5c. Will addressing the **transportation issue** include development or testing of construction practices, methods, or materials to establish potential reductions in greenhouse gas emissions?

☐ Yes

☒ No

☐ Unsure

5d. Will solving the **transportation issue** in question 1 study or support the reduction of vehicle miles traveled and single occupancy vehicle travel or support transition to electric vehicles (or other types of zero emission vehicles) or low-carbon alternative fuels?

☐ Yes

☒ No

☐ Unsure

5e. Will the solving the **transportation issue** in question 1 lead to work that will support, measure, or monitor, transportation system resilience in response to expected climate events, effects, or natural disasters in general?

☒ Yes

☐ No

☐ Unsure

5f. Will solving the **transportation issue** in question 1 lead to work that may result in better environmental conditions for wildlife and native vegetation?

☐ Yes

☒ No

☐ Unsure

5g. If you answered yes to any of the climate questions above or can provide alternative details related to climate, please provide additional information:

While climate and greenhouse gas reduction are not the primary focus of this project, the proposed research indirectly supports transportation system resilience through enhanced safety and operational efficiency. By improving safety awareness and compliance among medium-duty commercial vehicle operators, the project contributes to fewer roadway incidents and reduced service disruptions during extreme weather or emergency events. Increased understanding and adherence to safety requirements will help maintain the reliability and continuity of freight and service operations, which is an essential component of Oregon's broader climate resilience goals. The research outcomes align with ODOT's Strategic Action Plan objectives by strengthening preparedness and response capacity within a critical sector of Oregon's transportation network.

Equity

Equity can have many dimensions and impacts relating to communities and transportation. It is important that problem statement proposals clearly explain the equity dimensions or impacts being examined. Oregon commits to social equity in the OTP, specifically to *improve access to safe and affordable transportation for all, recognizing the unmet mobility needs of people who have been systemically excluded and underserved. Create an equitable and transparent engagement and communications decision-making structure that builds public trust.* We seek research that studies elements of this goal or applies analysis to specific transportation topics to ensure the resulting research recommendation is consistent with agency equity goals. For definitions and details please review the equity vision, goals, and objectives of the [ODOT Strategic Action Plan](#) and [Oregon Transportation Plan](#).

5h. Is the **transportation issue** identified as a need in Question 1 specifically focused on transportation equity?

☐ Yes

☒ No

☐ Unsure

5i. If the **transportation issue** is not focused on transportation equity, will the primary topic be assessed for equity benefits or impacts within the research project?

☒ Yes

☐ No

☐ Unsure

5j. Is the implementation of potential findings from this research likely to directly involve participation from an identified group that would benefit from an equitable process or outcome?

☒ Yes

☐ No

☐ Unsure

5k. Is the intended final product or information expected to support ODOT's equity efforts (Including but not limited to supporting one of the equity related objectives of the [ODOT's Strategic Action Plan](#) or [Oregon Transportation Plan](#)) ?

☒ Yes

☐ No

☐ Unsure

5l. If you answered yes to any of the equity questions above or can provide alternative details related to equity, please provide additional information:

Although equity is not the primary focus, this project strongly supports ODOT's equity and access goals by engaging a segment of the carrier community that is often underrepresented in safety programs and outreach efforts. Many operators in the 10–26k lb. category are small business

owners or independent service providers who may lack the resources or institutional knowledge to fully understand regulatory requirements. Through survey research, education, and outreach, the project will ensure that these carriers have equitable access to safety information, compliance assistance, and educational materials. This directly supports ODOT's commitment to transparent and inclusive decision-making while improving trust and engagement between the agency and the small business community it serves.

Safety

Research outcomes may include interventions and countermeasures to prevent or reduce the frequency of crashes or other causes of transportation-related injury or death; or may include measures to reduce severity of injury (including prevention of death) after a crash or other injurious event. For definitions and details please review the equity vision, goals, and objectives of the [ODOT Strategic Action Plan](#), [Oregon Transportation Safety Action Plan](#) and [Oregon Transportation Plan](#).

5m. Will solving the **transportation issue** in question 1 support improving **safety culture** for either transportation workers or the traveling public?

☒ Yes

☐ No

☐ Unsure

5n. Will the solving the **transportation issue** support improving safety through **healthy and livable communities**?

☒ Yes

☐ No

☐ Unsure

5o. Will solving the **transportation issue** support improving safety through using **best available technologies**?

☒ Yes

☐ No

☐ Unsure

5p. Will solving the **transportation issue** support improving safety through **communication and collaboration**?

☒ Yes

☐ No

☐ Unsure

5q. Will solving the **transportation issue** support improving safety through **investing strategically**? 5r. If you answered yes to any of the safety questions above or can provide alternative details related to safety, please provide additional information:

Safety is the central focus of this research. The project will strengthen Oregon's safety culture by addressing behavioral and knowledge-based factors that influence compliance among medium-duty commercial vehicle operators. Through the integration of survey data, stakeholder input, and educational recommendations, ODOT's Commerce and Compliance Division will gain actionable insights to guide targeted outreach and training initiatives. These efforts will help reduce crash risk, improve compliance with safety regulations, and promote safer roadway conditions for both operators and the traveling public. By emphasizing communication, collaboration, and evidence-based strategies, this project advances the objectives of the Oregon Transportation Safety Action Plan and supports ODOT's long-term goal of reducing transportation-related injuries and fatalities through proactive, education-driven interventions.

6. Corresponding Submitter's Contact Information:

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7. ODOT Sponsor Contact Information (Required if Submitter is not an ODOT employee)

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This form is not a grant application or contract document. Please do not include proprietary information on this form. Once this form is received ODOT may revise and publish the problem statement. If selected, ODOT will assign investigator(s) of the department's choosing to conduct research.