

WSDOT RESEARCH PROBLEM STATEMENT FOR 23-25 BN

DUE NO LATER THAN COB on [August 19, 2022, for Applied Research](#) and [October 28, 2022, for Innovative Research](#)

PLEASE SEND TO THE RESEARCH & LIBRARY SERVICES (RLS) OFFICE

Problem statement concepts may come from any source but must have a WSDOT sponsor for submittal.
One submittal allowed from each section, branch, program, office, or region for Applied and Innovative Research

1. RESEARCH PROBLEM STATEMENT TITLE:

Is this submitted for Applied Research or Innovative Research?

Applied Research –This research addresses the department’s high priority research needs and typically uses a consultant or university to perform research in conjunction with a WSDOT Subject Matter Expert (SME) and/or Technical Advisory Committee (TAC).

Innovative Research - This research explores more creative approaches, opportunistic or emergent research ideas & innovations that address department needs, may have a higher risk, but promise a significant return on investment or bring about transformational or systemic change if successful. Projects could include developing new guidance, new methods, standards/specifications and/or deploying new technology. This research could also utilize a university/consultant to perform research in conjunction with a WSDOT SME or TAC or performed entirely in house.

2. ESTIMATED COST AND TIMING

Estimated Cost: \$

(Remember to include equipment, travel, & tuition for graduate students & overhead in addition to researcher costs. See the RLS Budget checklist to help cost out your project. Maximum amount from **RLS is \$200k for Applied and \$100k for Innovative**)

Planned Start Date: Month/Year

Planned End Date: Month/Year

Is this another phase of an existing research project? If yes, what project?

3. RESEARCH PROBLEM DESCRIPTION Please be as specific as possible in answering these questions.

What is the problem?

Why does WSDOT need to solve this problem?

What is the significance/urgency of the problem? (Include any objective data that show the magnitude such as how many structures, locations, or modes are impacted)

4. RATING CRITERIA

Please describe how this research will address one or more of the following rating criteria:

STRATEGIC: The extent to which the proposed research addresses WSDOT Goals of **Workforce Development (20%), Inclusion (20%) and **Practical Solutions (20%)****

VALUABLE (25%): The likelihood the potential value of the research is greater than the cost of the study. What is the potential return on investment? How is the project helping mitigate risks on the ERM Risk Register? (See ERM Risk 2020 pdf -[WSDOT 2020 Enterprise Risk Register \(wa.gov\)](#))

IMPLEMENTABLE (15%) – Criteria for Applied Research: The likelihood the results will inform decisions, create new tools, materials or products or influence changes to policies or procedures.

INNOVATION (15%) – Criteria for Innovative Research: What makes the research particularly innovative, and/or bring transformational or systematic change to the agency.

WSDOT Strategic Plan: <https://wsdot.wa.gov/about/secretary/strategic-plan/doc/wsdot-strategic-plan-handout.pdf>

5. RESEARCH OBJECTIVE

What is the proposed research objective and scope to address the problem?

How will the research solve this problem?

6. IMPLEMENTATION

Which programs in the department does this problem impact?

What benefits is this research project anticipated to deliver and how do you anticipate the results will be used within WSDOT?

What are the specific deliverables?

Is the Division/Office willing to lead the implementation of the research if successful?

7. LITERATURE SEARCH

At a minimum, check the literature in the [Transportation Research Information Services](#) and [Research in Progress](#) databases. You can also request a literature search from the [WSDOT Library](#). Please provide a brief summary of the literature search results.

8. Do you have a preferred Principal Investigator (PI) for this research problem? (If no PI is identified and this research is funded, an RFQ will be issued by the WSDOT Research Office to select a PI.)

NO YES If yes, who and why? (e.g., A PI has unique knowledge (describe).)

Can the PI provide additional funding (e.g. Pac Trans or other program funds)?

NO YES If yes, indicate whether funding has already been approved and identify the source of funds and amount. There are no points assigned in evaluating the answer to this partnership funding question.

9. WSDOT Sponsor:

WSDOT SME or TAC that will work with RLS if problem statement is selected for funding:

WSDOT Division Director:

WSDOT Assistant Secretary:

Research Manager:

Note: All submitted problem statements need to be prioritized by the Division Director and reviewed by the responsible Assistant Secretary prior to submittal to RLS.