August 25, 2017

Greetings,

The Colorado Department of Transportation (CDOT)-Division of Transportation Development- Applied Research and Innovation Branch (ARIB) is soliciting problem statements to develop the FY19 research program.

We appreciate your effort in submitting your problem statements to CDOT research staff by Friday, October 27, 2017. A problem statement is a short form describing a transportation problem and/or potential innovation that is proposed for detailed study. Research ideas will be reviewed by the appropriate CDOT Research Oversight Team (ROT) members and then submitted to the Research and Implementation Council (RIC) for ranking, approval and fund allocation.

Send your problem statements to the following appropriate research program area manager:

- Aziz Khan <u>Aziz.Khan@state.co.us</u>, (303) 757-9522 Structures, Hydraulics, Soils, and Geotechnical;
- Bryan Roeder <u>Bryan.Roeder@state.co.us</u>, (303) 512-4420 Environmental, Sustainability, and Water Quality;
- David Reeves <u>David.Reeves@state.co.us</u>, (303) 757-9518 Safety, Operations, and Planning;
- Roberto DeDios Roberto.DeDios@state.co.us, (303) 512-4771 Pavements and Materials; and
- Amanullah Mommandi <u>Amanullah.Mommandi@state.co.us</u>, (303) 757-9044 Additional uncategorized research topics and ideas.

The problem statement form is attached and available on the ARIB website which can be accessed at https://www.codot.gov/programs/research/problem-statement.

Note that this is **NOT** a process to apply for CDOT research funds, but this effort is undertaken to formulate a comprehensive set of transportation-related research ideas. Once the research ideas are prioritized, selected and funded, a CDOT study panel develops the final scope of work and universities and consultants are asked to submit proposals to conduct the research. For approved projects, funds will be available for encumbrance in October of 2018.

Again, thank you in advance for your time and effort in sharing with CDOT your novel and innovative ideas. If you have any questions related to the research program, please do not hesitate to contact us.

Sincerely,

Amanullah Mommandi, M.S., P.E. Director of Applied Research and Innovation Branch CDOT - Division of Transportation Development

Tel: (303) 757-9044

E-mail: amanullah.mommandi@state.co.us





 \square more than 3 years

CDOT Research Problem Statement

PROBLEM STATEMENT TITLE: [Name of proposed Research Study]
AUTHOR: Name: Organization: Phone: E-mail: Date Submitted:
SPONSOR: [CDOT Branch/Program Manager or Research and Implementation Council (RIC) member who is supporting the Research Study]
CHAMPION: [CDOT staff who will lead the research and have a major involvement in the study and implementation of the results. No Research Studies will be initiated without a CDOT staff champion.]
DESCRIPTION OF PROBLEM STATEMENT: [Background and description of research idea]
PRODUCT OF RESEARCH: [Describe the expected product of the research that can be used for planning, designing, building, maintaining or operating, and improving safety of transportation infrastructure in Colorado.]
BENEFITS OF RESEARCH: [Describe the expected benefits of the research. When will they be realized? How can they be measured and tracked?]
ESTIMATED TIME TO COMPLETE RESEARCH: □ 6 months □ 1 year □ 2 years □ 3 years



COST FOR RESEARCH:

[Please include the itemized estimated cost. The funds for approved projects will be available July 1, next fiscal year.]

<u>Itemized Cost Estimate:</u>

Total Cost Estimate:
☐ less than \$25,000
□ \$25,000 – \$50,000
□ \$50,000 – \$75,000
□ \$75,000 – \$100,000
□ Other, please specify.

LEVERAGE/FEDERAL FUNDS:

[Would others (states, local governments, federal, etc.) be interested in this research? Are there already funding partners, or should CDOT pursue funding partners?]

RESEARCH IMPLEMENTATION AND RECOMMENDATION:

[Describe how the research recommendations can be used in the planning, design, construction, maintenance or operation, and safety improvement of Colorado's transportation system. Identify training need and use of products.]

RESEARCH PROGRAM AREAS: [Select one or more]

☐ Structures, Hydraulics, Soils, and Geotechnical Aziz.Khan@state.co.us, (303) 757-9522	
☐ Environmental, Sustainability, and Water Quality Bryan.Roeder@state.co.us, (303) 512-4420	/
☐ Safety, Operations, and Planning David.Reeves@state.co.us , (303) 757-9518	
☐ Pavements and Materials Roberto.DeDios@state.co.us , (303) 512-4771	
☐ Additional uncategorized research topics Amanullah, Mommandi@state.co.us, (303) 757-	904

Please send completed form to the above appropriate research program area manager(s) by e-mail. If you have any questions, please contact the above individuals.