Need Statement: Describe the problem or the opportunity. Include background and objective.

Local agencies are wanting more data on Grade B vs. Grade C asphalt binders, specifically cost vs. performance. The table below is from the MnDOT PG Binder Guidelines-MSCR:

Grade C asphalt binder is polymer modified providing more elasticity at lower temperatures, which should be better to reduce thermal cracking. However, it costs more. The focus of this study is to evaluate the various asphalt binders under a range of temperatures, conduct a benefit-cost analysis (initial cost of binder vs. reduction in crack maintenance) and provide recommendations on when to use, specifically for lower volume roads.

As part of the research:
- Review performance data (via State Aid or MnDOT Pavement Management) and analyze to compare B versus C performance in Minnesota.
- Review case studies (survey MN local agencies to determine conclusive list). Some known agencies include:
  - Beltrami County using C asphalt binder; neighboring county uses B.
  - St Louis has at least one comparison example: Used B asphalt binder (with excessive wrap accidentally) and C asphalt binder (with less wrap) on nearby roads.
Suggested Deliverables:

- B/C evaluation of Asphalt Binders
- Guide to assist local agencies on binder selection – some input parameters to include new construction or rehabilitation, traffic and local climatic conditions,

How does this project build upon previous research (include title or reference to a completed research effort)?


Provide names to consider for a Technical Advisory Panel:

- John Garrity, MnDOT
- Dave VanDuesen, MnDOT
- Paul Nolan, MnDOT
- Kent Exner, City of Hutchinson
- Dan Wegman, Braun Intertec
- Bruce Hasbargen, Beltrami County
- Jim Foldesi, St. Louis County
- Cory Slagle, Washington County
- Add city representative
- Add Southern MN County rep.