ARDOT TRC TRANSPORTATION RESEARCH COMMITTEE

PROBLEM STATEMENT
No. 21

RESEARCH PROBLEM STATEMENT

DATE: 09/25/2019	**PROJECT AREA:** Materials

TITLE: Identifying Best Practices for Reclaimed Asphalt Pavement Methods, Materials and Quality Control

PROBLEM STATEMENT:

Reclaimed Asphalt Pavement (RAP) can be used to replace up to 30 percent of virgin aggregate in asphalt concrete pavement mixtures. There are ongoing efforts across the nation to test pavement mixes with even higher RAP content. Some ArDOT Districts have reported pavement failures in new construction using RAP. The specific cause of these pavement failures is currently unknown. Contributing factors of RAP to the pavement failures is currently not understood; ArDOT specifications are being followed. Stockpile testing using specified methods is needed to accurately determine RAP aggregate and AC binder content. Field testing of pavements containing RAP would be beneficial in measuring pavement performance and durability. A review of other state DOT specifications would be helpful in assessing the current state of practice. Research is needed to fully assess why some pavements incorporating RAP show poor performance, and to improve specifications so that high quality and durable pavements are assured in the future.

OBJECTIVES:

-Literature review and review of state DOT specifications and special provisions.
-Review quality over time of completed projects using pavement composed of more than 15% RAP content.
-Review current specifications for RAP and recommend any beneficial modifications or additions.
-Develop guidelines for use of RAP and for materials control and testing. Determine quality control for stockpiles and materials handling.
-Document findings, prepare any new or revised Specifications and Special Provisions.

FORM OF RESEARCH IMPLEMENTATION AND RETURN ON INVESTMENT:

Research results will be used to inform future revisions of ArDOT specifications and materials quality control. Asphalt concrete hot mix (ACHM) overlays currently cost $98,000 per lane mile for all roadway types. Cost savings would be realized by providing the highest quality product possible to minimize life cycle cost.

Estimated Project Duration: 24 **Months**

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Standing Subcommittee Ranking	Advisory Council Ranking	Statement Combined with Statement Number(s)