The Effects of Implements of Husbandry "Farm Equipment" on Pavement Performance

-A Pooled Fund Study Proposal by the Minnesota Department of Transportation

MnROAD
Office of Materials

What Equipment?

MnROAD
Office of Materials

What Equipment?

MnROAD
Office of Materials

What Equipment?

MnROAD
Office of Materials

What Equipment?

MnROAD
Office of Materials

Proposal Origin and Background

-Local Gov't Initiated
-Also Requested by Industry
-Responding to Changed Farming Practices

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnROAD
Office of Materials

Proposal Origin and Background

-Minnesota Statutes Set a Load Limit of 500 lb/in of Tire Width But Do Not Limit Axle Weights or Self-Propelled Implements

-Floatation Tires May Provide Advantages

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnROAD
Office of Materials

Proposal Purpose and Objectives

-Determine Pavement Responses to Selected Agricultural Equipment

-Compare to Typical 5 Axle Semi

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnROAD
Office of Materials

Proposal Purpose and Objectives

-Establish Tire and Axle Weight Limits that Protect Both Local Road and Agricultural Interests

-Influence State Statutes and Legislation

MnROAD
Office of Materials

Proposal Purpose and Objectives

Construct New Test Area at the MnROAD Facility

MnROAD
Office of Materials

Proposal Purpose and Objectives

-Develop Multi-State Standards Regarding Implements

-Directly Involve Industry

-Allow for On-Going Testing of New Implements

MnROAD
Office of Materials

Suggested Project Tasks

-Select and Design Test Pavements and Instrumentation Systems

-Construct Test Cells

-Conduct Pavement Response Testing

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnROAD
Office of Materials

Suggested Project Tasks

-Perform Computer Modeling
-Arrange Technology Transfer for Pooled Fund Partners
-Produce Interim and Final Reports

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnROAD
Office of Materials

Project Budget

-Estimated Cost is $475,000

-5 Pooled Fund Partners

-Cost Per Partner is $35,000/Year for Each of 3 Years = $105,000

-Project Letting Fall 2006

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnROAD
Office of Materials

Contact MnDOT

-Lead Contact is Tim Clyne, tim.clyne@dot.state.mn.us, 651-779-5626

-Pooled Fund Website is www.pooledfund.org/

-Proposed Study #1040

MINNESOTA DEPARTMENT OF TRANSPORTATION

MnROAD
Office of Materials