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Item 1

Improving Driver Perception of Signals near Vertical Curves
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION OFFICE (RTI)
RTI VSR 4084 • 2010

Danny Magee, TxDOT Laredo District's Director of Transportation Operations, presents summary information regarding the implementation of advanced warning signalization on Loop 20 at an interchange with 40.5% slope under RTI Research Project 5-4084. This project analyzes signalized intersections located beyond crest vertical curves. The Texas MUTCD provides for upstream use of SIGNAL AHEAD text or symbolic advanced warning signing where the signal heads for the intersection are not visible for some minimum distance upstream of the intersection.

This video is available at http://www.youtube.com/watch?v=4NWWLoFhjMU (Running Time: 2:01 min)

Item 2

Ultra-High Pressure Water-Cutting for Roadway Maintenance Applications
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)
RTI VSR 5230 • 2011

Darlene Goehl, Pavement and Materials Engineer with the TxDOT Bryan District, describes an implementation project using water to cut asphalt and improve friction (HydroScour). RTI Research Project 5-5230 studied cost-effective, short-term solutions to address the problem of "bleeding" or "flushing" asphalt for its pavements with seal coats and surface treatments.

This video is available at http://www.youtube.com/watch?v=YvLo5RVKFxk (running time: 3:22 min)

Item 3

Evaluation of Warm Mix Asphalt New Technology
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION OFFICE (RTI)
RTI VSR 5597 • 2010

Jesse Fleming, Area Engineer in Graham, Texas, presents information regarding the laying of Hot Mix Asphalt in October 2008 for RTI Research Project 0-5597. The project studies warm mix asphalt (WMA)—a generic term for a variety of technologies that allow the producers of hot mix asphalt (HMA) to lower the temperatures at which the material is mixed and placed on the road. Reductions of 50- to-100 degrees Fahrenheit have been documented. These temperature reductions reduce fuel consumption, enhance compaction, allow for increase in haul distances, and extend the paving season.

This video is available at http://www.youtube.com/watch?v=z57JPvUwo9k (running time: 3:04 min)
Item 4

Development of Very Thin Overlay Systems
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)
RTI VSR 5598 • 2011

K.C. Evans, District Laboratory Geologist for the TxDOT Odessa District, speaks about Project 0-5598 in Ector County. The project seeks to evaluate the performance of Very Thin Overlay that could be used as wearing surfaces. Three mixes are being evaluated: a crack-attenuating mix (CAM), a stone matrix asphalt (SMA) TxDOT Item 346, and a permeable friction course (PFC) with small aggregate diameter.

This video is available at http://youtu.be/p3ZeFDs7JHc (Running Time: 3:19 min)

Item 5

In-Service Evaluation of Cable Median Barrier Performance
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION OFFICE (RTI)
RTI VSR 5609 • 2010

Marla Jasek, TxDOT Yoakum District's Director of Transportation Operations, presents summary information on a project installing a fence on 80 miles of median in the Yoakum District which significantly reduced the number of head-on collisions and fatalities in the District. The installation and evaluation of the cable median barriers is the result of Texas Department of Transportation (TxDOT) Research and Implementation Office (RTI) Research Project 0-5609, "In-Service Evaluation of Cable Median Barrier Performance."

This video is available at http://www.youtube.com/watch?v=jvTxsJrL40g (running time: 2:48 min)

Item 6

Synthesis Study on Variable Asphalt Shot Rates for Seal Coat
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)
RTI VSR 5833 • 2011

RTI Project 0-5833 produced a quantitative testing procedure that can be used in addition to visual appearance of the roadway when determining whether or not to transversely vary the asphalt shot rate, and how much to vary it when the decision is to do so. In this video Paul Montgomery, TxDOT-Lufkin District's Director of Maintenance, discusses the use of Transverse Variable Asphalt Rate (TVAR) by the Texas Department of Transportation.

This video is available at http://youtu.be/mneUw3LV3FI (Running Time: 3:06 min)
**Item 7**

**Bioretention for Stormwater Quality Improvement in Texas**

TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION OFFICE (RTI)

*RTI VSR 5949 • 2010*

Jon Geiselbrecht, District Vegetation Manager for TxDOT's Austin District, presents information concerning Project 0-5949. RTI Project 0-5949 is a four-year study that will investigate the applicability and identify benefits and drawbacks of bioretention best management practices (BMPs) in Texas, specifically for highway related applications.

This video is available at [http://www.youtube.com/watch?v=n0URAaDVB3Y](http://www.youtube.com/watch?v=n0URAaDVB3Y) (Running time: 3 min)

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**Item 8**

**ConcreteWorks v.2**

TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION OFFICE (RTI)

*RTI VSR 6332 • 2010*

Jonathan Poole of Wiss, Janney and Eltsner Associates, Inc. in Dallas, Texas, and Ralph Browne, TxDOT Area Engineer for North Tarrant County, discuss the ConcreteWorks software, a thermal crack prediction tool designed to help improve concrete mix design. Information on the newest update, version 2.1.3, is included at the end.

This video is available at [http://www.youtube.com/watch?v=dIAQh7MEGTQ](http://www.youtube.com/watch?v=dIAQh7MEGTQ) (running time: 2:47 min)

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**Item 9**

**Automated Flagger Assistance Devices**

TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)

*RTI VSR 6407 • 2011*

RTI Research Project 0-6407 will determine the operational and safety effectiveness of AFADs relative to the use of flaggers at lane closures on two-lane, two-way roadways. Michael Chacon, Policy and Standards Engineer with TxDOT’s Traffic Operations Division, discusses the project in this video.

This video is available at [http://youtu.be/BCA7NXzr89w](http://youtu.be/BCA7NXzr89w) (Running Time: 4:13 min)
Item 10
Texas Energy Developments and TxDOT Right of Way
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)
RTI VSR 6498 • 2011

RTI Project 0-6498 will measure the impact of increased levels of energy-related activities on the TxDOT right of way and infrastructure, develop recommendations to reduce and manage TxDOT's exposure and risk resulting from these activities, and develop recommendations for potential changes to relevant Texas Administrative Code rules. Dale Booth, Advanced Planning Engineer with TxDOT's Tyler District, discusses the project in this video.

This video is available at http://youtu.be/BE_303BKMKA (Running Time: 3:42 min)

Item 11
Preparing for EPA Effluent Limitation Guidelines
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)
RTI VSR 6638 • 2011

RTI Project 0-6638 will conduct monitoring and testing experiments to determine "typical turbidity" representative of TxDOT's construction site discharges, collect performance data on innovative erosion and sediment control measures that might be expected to meet a forthcoming federal discharge standard, and produce Guidance Measures and Sampling Protocols for TxDOT to negotiate with TCEQ in the development of statewide monitoring/sampling procedures. Amy Foster, Environmental Specialist/ERM Team Lead with TxDOT's Environmental Division, discusses the project.

This video is available at http://youtu.be/bSVDNHXIDzE (Running Time: 3:22 min)

Item 12
Hydraulic Performance of Rectangular Deck Drains
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)
RTI VSR 6651 • 2011

Jack Kayser, TxDOT-Austin District Hydraulic Engineer, discusses Project 0-6651. RTI Project 0-6653 will evaluate whether the adapted slotted drain FHWA method is adequate and accurate to predict the hydraulic performance of the scupper, determine if a correction factor should be applied or a new equation developed, and develop a procedure to allow simulation of the scupper with existing software.

This video is available at http://youtu.be/dnasgRC0NaC (Running Time: 3:26 min)
**Item 13**

Microsurfacing as a Pavement Maintenance Tool
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION OFFICE (RTI)
RTI VSR Microsurfacing • 2011

Paul Montgomery, TxDOT Lufkin's Director of Maintenance, discusses how the Lufkin District uses microsurfacing as an efficient maintenance tool.

This video is available at [http://www.youtube.com/watch?v=2RJu8P9sx2w](http://www.youtube.com/watch?v=2RJu8P9sx2w) (running time: 3:48 min)

**Item 14**

Corridor Studies
TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). RESEARCH AND TECHNOLOGY IMPLEMENTATION (RTI)
RTI VSR RMC 1 Corridor Studies • 2011

Bryan Rashke, TxDOT-Odessa District's Director of Operations, speaks about how current corridor studies in that District utilize Flexible Pavement Rehabilitation and Ground Penetrating Radar techniques developed in multiple RMC 1 projects. In-depth analysis of existing pavement structure helps engineers improve the life-expectancy of pavements on high traffic roads.

This video is available at [http://youtu.be/-H6HjBN3uDY](http://youtu.be/-H6HjBN3uDY) (Running Time: 2:48 min)