Asphalt-Rubber Workshop



REGISTRATION FEES:

GENERAL: \$100 DOT/Government: \$50 RPA Members: \$50 ANY Walk-in Registration: \$125

Registration fees includes:

<u>The AR2006 Conference DVD</u>
<u>a \$100 value!</u>

plus a complete specifications notebook.





NJAPA

RUTGERS

Center for Advanced Infrastructure and Transportation





The Rubber Pavements
Association, Northeast Pavement
Preservation (NEPP), Transportation
Research Board Committee AFK30,
APWA, NJAPA and NJDOT Invites
you to their
Asphalt-Rubber Workshop!

Date: November 13, 2008

Time: 08:00 AM to 5:30 PM

Location: Rutgers University
Center for Advanced Infrastructure &

Transportation (CAIT)

100 Brett Rd.

Piscataway, NJ 08854-8058

Phone: (732) 445-0579

Come and meet the leading EXPERTS in Asphalt-Rubber Technology. This one-day seminar is intended to provide participants with a comprehensive understanding of Asphalt-Rubber paving materials.

The principal focus of the seminar is to offer attendees the essential skills needed for selecting asphaltrubber applications to capture the advanced engineering benefits such as greater durability and crack resistance, longer life cycle and cost savings, safety, noise reduction and reduced thickness.

Upon the conclusion of the seminar, participants will possess the necessary knowledge to achieve success with asphalt-rubber projects and capitalize on the benefits for both the highway agency and users!

REGISTER BY OCTOBER 31st, 2008

Continental Breakfast and Lunch provided!

Meet the Speakers

Douglas D. Carlson

Executive Director—Rubber Pavements Association

1801 S. Jentilly Lane Ste A-2, Tempe, AZ 85281-5738

Phone: 480-517-9944 - E-Mail: dougc@rubberpavements.org

Over nine years of experience working within the rubberized asphalt industry conducting over 60 conferences, workshops, seminars, and technology tours in Arizona, California, Texas and worldwide with the Rubber Pavements Association. He is a recognized expert used for presentations in conferences concerning rubberized asphalt, tire recycling and the use of granulated tire rubber in engineering materials. He has held or maintained the following positions: Executive Director, Rubber Pavements Association, February 2003 to Present, Director, Recycled Tire Engineering and Research Foundation, November 2003 to Present, Federal Highway Administration Quiet Pavement Technology European Scan Team Member 2004, Member of the US Quiet Pavements Expert Task Group, 2004 to Present, Member, Transportation Research Board 2004 to Present, Member, American Society for Testing Materials 1999 to Present, Member, Caltrans Rubberized Asphalt Concrete Task Group March 1998 to Present (Co-Chairman of the Rubberized Asphalt Concrete, Special Provision Performance Grade Binder Update 2005), Member, US EPA Resource Conservation Challenge, Tire Cluster, Rubber Modified Asphalt Subcommittee May 2002 to Present.

He has other unique qualifications: Project Administrator, Crumb Rubber Concrete Design Guide Development, Arizona Department of Environmental Quality, Contract EV 05-0002 AC, October 2004 to Present, Executive Board Member, Arizona Highway Users Conference 2002 to Present, Project Proposal Reviewer for EPA projects related to waste tires, Paper Reviewer for granulated tire rubber technologies, ASCE and JSWTM, Trained Combat Engineer and Bulk Fuel Specialist, USMC 1987-1995

Barry Takallou, Ph.D, P.E.

President, CRM (Crumb Rubber Manufacturers) of America

11400 E. Pecos, Queen Creek, Arizona 85242

Phone: 480-987-3006 - E-Mail: hbtak@aol.com

Dr. Takallou received a B.S. in Civil Engineering at California State University in 1981. He received his M.S. and Ph.D. in Civil Engineering at Oregon State University. Dr. Gary Hicks was his professor and mentor at OSU. He is affiliated with numerous professional organizations including the Transportation Research Board (TRB), APWA, ASCE, AAPT, ISAP and many others.

He has authored numerous publications on asphalt rubber pavement technology and has been a speaker at several national and international symposiums, including the American Society of Civil Engineers, American General Contractors, National Paving Association, ASTM, national tire seminars in Florida, Philadelphia and Transportation Research Board, New York, Swedish National Paving Conference, and the International Conference on Paving in Cold Regions held in Ottawa, Canada.

He is currently a member of the RPA Executive Committee, a founding Director of the Recycled Tire Engineering and Research Foundation and is active in many local California technical organizations including the Greenbook Committee. Dr. Takallou spent many years in the crumb rubber modified industry prior to becoming involved in tire recycling. He has authored numerous technical papers on rubber modified asphalt pavements as well as tire recycling. Dr. Takallou has recently established a tire processing equipment manufacturing plant, Artisan Machinery Global, in Illinois. He currently operates two tire recycling plants, the Queen Creek plant in Arizona and a Los Angeles plant.

Jeffrey R. Smith

Assistant Marketing Director, International Surfacing Systems

6751 West Galveston, Chandler, AZ 85226

Phone: (209) 996-7605 - E-Mail: jeff.smith@asphaltrubber.com

Jeffrey (Jeff) Smith is a veteran in both the tire recycling, chip seal and paving aspects of the asphalt-rubber industry. He started his career in 1976 working as a laborer and in the laboratory at Sahuaro Petroleum and Asphalt Company, in Phoenix, Arizona. Sahuaro was the original and first asphalt-rubber binder supplier that utilized the "McDonald" wet process. Smith continued working with the various construction crews and in the laboratory at Sahuaro, gaining years of experience in asphalt-rubber binder production, testing and construction procedures concerning asphalt-rubber chip seal placement. In 1983 Sahuaro sold

their asphalt-rubber division and International Surfacing Inc. (ISI) was formed. At ISI Smith became a project superintendent gaining further experience not only in asphalt-rubber chip seal construction but also asphalt-rubber hot mix manufacture and placement. In 1987 he became Marketing Director and pioneered a national and international effort to promote the use of asphalt-rubber systems.

In 1993 Smith joined the crumb rubber production side of the asphalt-rubber industry taking a position as Vice President of Marketing with Tiregator, Inc., a Texas based crumb rubber producer. In 1994 Smith formed his own consulting company (Modified Asphalt Technologies) and also joined the staff of Baker Rubber as National Sales Manager continuing in that position until Baker Rubber was acquired by Polytek Rubber and Recycling in 1997. Smith continued in that same role when Polytek was acquired by Landstar Inc. working until 2003. Smith returned to an industry consultant role when Landstar went out of business. Some of his clients included FNF Construction, Granite Construction, International Surfacing Systems, Western States Surfacing, Stratco, Inc., Eurectec, various governmental agencies and various crumb rubber manufactures. Smith took a full time position with International Surfacing Systems in July of 2004 and currently serves as their assistant marketing director and technical director.

Dr. Serji Amirkhanian

Director, Asphalt Rubber Technology Service, Clemson University Phone: 864-656-3316 - E-Mail: kcdoc@clemson.edu

Professor Amirkhanian is the Mays Professor of Transportation in the Civil Engineering Department of Clemson University and an Alumni Distinguished Professor, in addition to being the Director of Asphalt Rubber Technology Service (ARTS). He has been teaching and conducting research in the area of construction materials, specifically hot mix asphalt mixtures, for over 2D years. He has published over 11D peer reviewed journal publications, conference papers, and research reports in addition to over 2DD presentations around the country and the world. Professor Amirkhanian has been involved with many committees of ASTM, ACSE, TRB, and other professional associations for many years. In addition, he is the Coordinator of South Carolina's Department of Transportation (SCDDT) technician certification program for Hot Mix Asphalt (HMA), Foundations, and Earthworks.

Cliff Ashcroft

Vice President California Operations, FNF Construction

1310 Domingo Road, Fullerton, CA 92833

Phone: 714-525-2666 - e-mail: cliffa@fnfinc.com

Cliff Ashcroft started in the Asphalt-Rubber industry in 1989 when he worked for the first California based Asphalt-Rubber contractor as their Marketing Manager. In 2000 he joined FNF Construction as a Vice President of California Operations. His pavement career started in 1984 with the Equipment Division of Sully Miller Contracting in Southern California. Later he served as Plant Manager of Production and Sales at the Norwalk Concrete Plant of Blue Diamond Materials. Prior to joining the Asphalt-Rubber industry, Cliff served as Manager of the Blue Diamond Class II Base Department in Long Beach, CA. Cliff has a solid reputation as an industry expert in the use of Asphalt-Rubber and is well known to public works agencies in Southern California. Cliff is President of the Rubber Pavements Association , having served as a RPA Director for several years. He has also served as the Co-Chair of the RPA California Task Force and Chairman of the RPA Annual Awards Committee from 2000-2004. He is an active member of several Caltrans/RPA committees and participated in the review team of asphalt rubber projects placed throughout the state. Cliff has been a participant in workshops in California, Texas and Arkansas and presented a paper at Asphalt-Rubber 2003 in Brazil. He is a member of the California APA and also serves on the Green book Committee in Southern California.

Anne Stonex

Senior Pavement Engineer

MACTEC Engineering & Consulting, Inc. 3630 East Wier Ave.

Phoenix, AZ 85040

Phone: 602-437-0250 XT 252, FAX: 602 437-3675

E-Mail: ASTONEX@mactec.com

Ms. Stonex has specialized in conventional and modified bituminous and hot-mixed asphalt (HMA) pavement materials and construction for over 20 years and is a nationally recognized

expert on asphalt rubber paving materials. Her career to date has provided a wide range of experience including conducting sponsored research projects, writing technical reports, setting up and managing materials testing laboratories, structural pavement design, forensic analysis of distressed pavements, use of Marshall, Hveem, and Superpave systems for mixture design and analysis of asphalt paving materials, developing asphalt rubber binder and mixture products and specifications, design and application of surface treatments and of cold mixes for in-place and plant recycling, field control of pavement construction, Superpave implementation, and HMA technology transfer including conducting large training and certification programs.

Ms. Stonex has also planned and performed numerous pavement and related geotechnical investigations, and has developed structural pavement designs, pavement management plans and bid packets for construction and rehabilitation of roadway and airport pavements and parking facilities. She has served a variety of public and private sector clients throughout the United States, including the U.S. Air Force Engineering and Services Center, Bureau of Indian Affairs, various state and municipal agencies, the Northeast Regional Pooled-Fund Study, the Pennsylvania Department of Transportation Bituminous Technician Certification Program, Ford Motor Company, Chrysler Corporation, Michigan Bell Telephone, large and small paving contractors and materials suppliers, and home-owners associations.

Mark Belshe Vice President, Asphalt-Rubber

FNF Construction, Inc. 115 S. 48th St. Temoe, AZ 85281

Phone: (480) 784-2910, Fax: (480) 377-9806

E-Mail: mbelshe@fnfinc.com

Mark Belshe is a Vice President and Project Sponsor for FNF Construction, Inc., one of the largest contractors and producers of asphalt rubber binders in the Southwest United States. FNF, a general contractor based in Tempe, Arizona, provides asphalt rubber binders for its own hotplants and also works as a supplier to various hotmix material suppliers throughout Arizona, California and other market areas. Mark has been with FNF for nearly 20 years working as a Project Engineer, Estimator, Project Manager and Project Sponsor, and he was instrumental in building the company's asphalt rubber operations. Mark has been active in the Rubber Pavements Association, serving as the Association President in 1999 and 2000. He is also active in various technical committees including the Pacific Coast Conference on Asphalt Specifications, the Arizona Rock Products Association, the RPA Technical Advisory Committee and several standing committees with the Arizona Department of Transportation. Mark has a B.S. in Civil Engineering from the University of Arizona and a M.S. in Civil Engineering from Arizona State University. He is a Registered Professional Engineer in California and Arizona as well as a Registered Land Surveyor in Arizona.

Eileen Sheehy, PE Manager, Bureau of Materials New Jersey Dept. of Transportation P.O. Box 607. Trenton, NJ 08625

Ph: (609) 530-2307, Fax: (609) 530-5158, E-mail: eileen.sheehy@dot.state.nj.us

Eileen Sheehy has been the Manager of the Bureau of Materials for the New Jersey Department of Transportation for over 1D years. In her 25 years with the Department of Transportation, she has worked mostly in Materials but has also worked in Construction and Design. She has a B.S. in Chemical Engineering from Rutgers University and is a Professional Engineering

Richard L. Powers, PE Senior Project Manager

Jacobs Engineering

neer in New Jersey.

Phoenix, AZ

Phone: 480,763,8832, Cell: 928,607,1122

E-Mail: Rick.Powers@jacobs.com

Mr. Richard I. Powers, P.E. is a registered professional Engineer in Arizona and California and a visionary advocate of transportation planning, design and construction of Arizona's highways throughout the state. He has recently retired from the Arizona Department of Trans-

portation (ADDT) after 28 years of service and has an extensive, diverse background in transportation planning, research, design, construction, and maintenance through out the state of Arizona. He has served in the Phoenix metro area, Flagstaff, Holbrook, and Globe districts and has experience in planning, programming, pre-design, design, construction and maintenance of highways, both from an urban and rural perspective throughout the state. He has been involved in the construction of many miles of asphalt pavements throughout the state and has extensive background in the construction and maintenance of asphalt rubber pavements and ACFC's. Mr. Powers is a graduate of the University of Kansas (BSCE) and Arizona State University (MS). He has given presentations on the history of Arizona highways, maintenance challenges, construction projects, programming processes, research topics and maintenance topics. His most recent presentations were; 2006 National Snow Conference on Snowplow Simulator Training and his 2007 International Conference paper on Low Volume Roads on Innovative Treatments for Low Volumes Roads in Arizona. He has recently written a book on the history of the Apache Trail scheduled to be published in early 2009. He is currently working as a Senior Project Manager for Jacobs Engineering in the Phoenix office.

Thomas Bennert Laboratory Support Specialist

Rutgers the State University of New Jersey 93 Road I, Piscataway, NJ 08854

Phone: (732) 445-5376

Email: bennert@eden.rutgers.edu

Thomas Bennert is the supervisor of the Rutgers University Asphalt Pavement Laboratory (RAPL) and a Senior Research Engineer for the Center of Advanced Infrastructure and Transportation (CAIT) at Rutgers University. He is also the instructor for Mechanistic Pavement Design, a graduate level course at Rutgers University. His research interests include: advanced material characterization of hot mix asphalt and unbound materials for pavement design, reflective cracking in flexible pavements, pavement-generated noise measurements, and use of recycled materials for transportation-related applications.

Steven Rinaldi Research Scientist NJDEP, Bureau of Recycling and Planning P.O. Box 414, 401 East State St., Trenton, NJ 08625

Phone: (609) 984-3438 Email: Steven.Rinaldi@dep.state.nj.us

Steven Rinaldi is a Research Scientist in the New Jersey Department of Environmental Protection's Bureau of Recycling and Planning. Mr. Rinaldi works on a variety of recycling issues, including scrap tire management and also serves as a liaison to the NJDOT on various recycling issues. Mr. Rinaldi earned a Master Degree in Environmental Planning from Rutgers University.



AGENDA *

Asphalt-Rubber Worskhop - New Jersey

Registration starts at 7:00 AM

Welcoming Statements

Tom Bennert - Rutgers the State University of New Jersey

Introduction to Asphalt Rubber

By Doug Carlson - Rubber Pavements Association

An overview of rubberized asphalt technologies and common specifications, the engineering benefits of why scrap tire rubber is used in asphalt, and the cost savings that can come from using rubber in asphalt.

NJDEP Overview on Tire Recycling

Bv Steven Rinaldi - NJDEP

A look at the challenges related to managing scrap tires in New Jersey, tracking the flow of tires and some of the markets where scrap tires are beneficially reused.

Tire Recycling in the Northeast

By Barry Takallou P.E. PhD.- CRM

A whole scrap tire processor's look at the scrap tire market on a national perspective and growing markets, and crumb rubber specifications for use in asphalt.

BREAK

Overview of New Jersey's Asphalt Rubber History

By Eileen Sheehy - NJDOT

Follow the timeline of paving projects in NJ that used scrap tire rubber and how the re-use of open graded friction courses encouraged the use of rubber.

Update on Asphalt Rubber Research

By Serji Amirkhanian - ARTS Clemson University

A look at the development of the asphalt-rubber technology service at Clemson University and some of the research that has been completed on rubber mixes.

LUNCH - Presentation of Award to NJDOT

AR Binder and Mix Design

By Anne Stonex - MACTEC Engineering

Some differences in the design process must be considered when designing rubber modified binders and mixes and the differences are explained.

Construction of AR Pavements

By Mark Belshe - FNF Construction

The Asphalt-Rubber blending process is explained with a look at some of the equipment that is used to produce asphalt-rubber and the best practices used in placing rubber hot mix materials.

Pavement Preservation with AR

By Jeff Smith - International Surfacing Systems

Best practices for quality construction of spray applied systems such as chip seals and cape seals will be covered.

BREAK

Safety and Noise Reduction Benefits of AR

By Cliff Ashcroft - FNF Construction

Studies showing the benefit of using friction courses for safety and noise reduction, why DOTs choose to use them.

Winter Maintenance of AR-OGFC

By Richard Powers - Jacobs Engineering, former Globe District Engineer

Experiences from the high elevations of Arizona's mountainous regions in rubber open graded material performance, deicing agents and plowing.

Recycling of AR Pavements

By Anne Stonex - MACTEC Engineering

Rubber pavements have been successfully recycled and the information from the projects will be covered

Adjourn

* Subject to change

Register by: October 31st, 2008



To register contact: Guadalupe Dickerson gdickerson@rubberpavements.org **Rubber Pavements Association**

1801 S. Jentilly Lane, #A-2 Tempe, AZ 85281-5738 Ph: 480-517-9944 Fax: 480-517-9959 www.rubberpavements.org

REGISTRATION FORM

Thank you for participating in the Asphalt-Rubber Workshop

On Thursday, November 13th, 2008!

Please complete and sign the registration form and send along with your payment information to:

Rubber Pavements Association

P. O. Box 40878 Mesa, AZ 85274-0878 Fax (480) 517-9959

Email: gdickerson@rubberpavements.org

REGISTRATION FEES:

QTY*	Registration Type:	\$ Price	\$ Total
	General	100/person	
	DOT/Government employees	50/person	
	RPA Members	50/person	
	Grand Total		

^{*} If you are registering more than one attendee, please fill out page 2.

Attendee # 1 Contact Information					
Full Name:					
	Last	First		M.I.	
Company Na	ame				
Job Title:					
Address:					
=	Street Address			Suite #	

	City		State	ZIP Code	
Phone: ()	E-mail Address:			

PAYMENT INFORMATION							
Check #		Payable to Rubber Pavements Association					
Purchase Order	•						
CREDIT CAR	RD QF	TION PAYME	NT:				
Card Type				Number:			
Expiration Date:		1	Security Code:			ZIP Code	
Month / Year					Billing Zip Cod	e	
		Sign	ature				Date



Dedicated to encouraging greater usage of high quality, cost effective asphalt pavements containing recycled tire rubber.

		Attendee # 2 Contact Infor	Illation	
Full Name:				
	Last	First		M.I.
Company Na	ame			
Job Title:				
Address:	\			
	Street Add	ress		Suite #
		City	State	ZIP Code
Phone:)	E-mail Address:		
i \		I I		
		Attendee # 3 Contact Infor	mation	
Full Name:				
	Last	First		M.I.
Company Na				
Job Title:				
Address:				•
	Street Add	ress		Suite #
		City	State	ZIP Code
Phone: ()	E-mail Address:		
		Attendee # 4 Contact Infor	mation	
Full Name:		Attendee # 4 Contact Infor	mation	
Full Name:	Last	Attendee # 4 Contact Infor	mation	M.I.
Full Name: Company Na			mation	M.I.
			mation	M.I.
Company Na			mation	M.I.
Company Na Job Title: Address:		First	mation	M.I. Suite #
Company Na Job Title: Address:	ame	First	mation	
Company Na Job Title: Address:	ame	First	mation State	
Company Na Job Title: Address:	ame	ress		Suite #
Company Na Job Title: Address:	ame	ress		Suite #
Company Na Job Title: Address:	ame	ress City E-mail Address:	State	Suite #
Company Na Job Title: Address:	ame	ress	State	Suite #
Company Na Job Title: Address:	Street Add	ress City E-mail Address: Attendee # 5 Contact Infor	State	Suite # ZIP Code
Company Na Job Title: Address: Phone: (Full Name:	Street Add	ress City E-mail Address:	State	Suite #
Company Na Job Title: Address: Phone: (Full Name:	Street Add	ress City E-mail Address: Attendee # 5 Contact Infor	State	Suite # ZIP Code
Company Na Job Title: Address: Phone: (Full Name: Company Na Job Title:	Street Add	ress City E-mail Address: Attendee # 5 Contact Infor	State	Suite # ZIP Code
Company Na Job Title: Address: Phone: (Full Name: Company Na Job Title: Address:	Street Add	ress City E-mail Address: Attendee # 5 Contact Infor First	State	Suite # ZIP Code M.I.
Company Na Job Title: Address: Phone: (Full Name: Company Na Job Title: Address:	Street Add	ress City E-mail Address: Attendee # 5 Contact Infor First	State	Suite # ZIP Code
Company Na Job Title: Address: Phone: (Full Name: Company Na Job Title: Address:	Street Add	ress City E-mail Address: Attendee # 5 Contact Infor First	State	Suite # ZIP Code M.I.
Company Na Job Title: Address: Phone: (Full Name: Company Na Job Title: Address:	Street Add	ress City E-mail Address: Attendee # 5 Contact Infor First	State	Suite # ZIP Code M.I.