

BITUMINOUS PAVING CONFERENCE

50 YEARS

1960 - 2009



CONFERENCE

- University of Illinois
- Illinois Division of Highways
- Illinois Black Top Road Association

- Illinois Department of Transportation
- The Asphalt Institute
- Illinois Asphalt Pavement Association
- Federal Highway Administration

BITUMINOUS PAVING CONFERENCE

- Conference for the highway workers of the state of Illinois
 - State
 - Local
- Practice and implementation oriented
- Present national and state research
- Present IDOT accomplishments
- Improve relevance of both

1960

- Asphalt as a Highway Construction Material
 - Gene Abson – Chicago testing labs
- Bituminous Treated Bases Constructed with Asphalt Emulsions
 - Hugh A. Wallace – Managing Engr. Asphalt Institute, Dallas
- Bases Stabilized with Asphalt Cements and Cutbacks
 - James C. Johnson – Staff Engr. Asphalt Institute, MD
- Surfaces for Bituminous Treated Bases
 - Charles R. Foster – National Bituminous Concrete Assoc. TX

2009

- Asphalt Research at ICT
- IDOT Update
- Warm Mix Asphalt
- Overview of Polymer Supply for Asphalt Modification
- Transportation Funding in Illinois
- Fraud: Are You at Risk
- In Search of the True N-Design: Determining the Correct level of laboratory Compaction
- Centerline Joint Preservation
- Safety Issues
- Pay 4 Performance: District One Update

THEMES

- Liquid binder
- HMA mixtures
- Recycling, Rehabilitation, maintenance
- Construction
 - Equipment
 - Procedures
- Specifications
- Design
- People

DECADE 1: 1960 -1969

- Discussions of Bases, HMA surface, and surface treatments
- In-place stabilization and heater scarification, Windrow placement and pickup, Slag, End Result approach

1960 - 1969

- Asphalt Treated Bases
 - Emulsions, Cutbacks, Cements
- Pavement Design
 - AASHO Road test results
 - Illinois DOH Bituminous Pavement Design Guide
- Construction
 - Laying techniques, raking, rolling, windrowing, Distributer usage, automatic leveling devices and grade control,
- New liquids – cutbacks
- Full Depth Pavements

1960 - 1969 cont.

- Large projects
 - Edens – Kennedy Expressway
 - Traffic, planning and design, contractor experience
- Joints
 - Better joints, Infrared heaters
- Deslicking of pavements
- Rehabilitation
 - In Place stabilization, heater scarification
- Research on test tracks

1960 – 1969 People

- Gene Abson
- William Goetz
- Charles Foster
- W. E. Chastain
- A. C. Benkelman
- R. Dellert
- John Dierkes
- Charles Owens
- H. M. Yamanaka
- Bob Galloway
- R. F. Gorman
- M. R. Thompson
- E. J. Barenberg
- Donald R. Schwartz
- Jim Jackson

Decade 1 : 1970 - 1979

- Thin lifts for locals, BAM for counties, skid resistance research, Hot storage of mixes, independent laboratories
- Sulphur in asphalt, emulsion bases, drum dryer specs, placing hot mix, roller selection and procedures, OGF, IDOT Quality assurance results

1970 – 1979

- Asphalt Treated Bases
 - BAM, Emulsion Aggregate mixtures, use of local materials, emulsion bases
- Construction
 - Hot storage, surge bins, construction in extreme conditions, predicting compaction time, vibratory rollers, nuclear density gauge, future construction, drum drier specs, placement and roller selection and operation, full width paving, stage construction
- Safety
 - Emissions, thin lifts for skid resistance
- Full Depth Pavements
 - airports

1970 – 1979 cont

- Rehabilitation
 - Cold-Planing, HMA recycling, state of the art equipment, repaving for counties, overlay thickness and mix selection, local roads
- Liquid Asphalt
 - Availability, energy, sulphur replacement
- Surface Treatments
 - Design and construction, methods and placement procedures, challenges, wet bottom boiler slag,

1970 – 1979 cont

- Evaluation
 - Benkelman Beam analysis of bases, End result specs, quality assurance results,
- Mixtures
 - Pothole, foamed, Open Graded Friction courses

1970 – 1979 People

- J. Saner
- Jon Epps
- Jim Burton
- Mike Darter
- Barry Dempsey
- E. J. Huffington
- D. R. Gallagher
- J. N. Dybalski
- C. A. Sanders
- Bud Brakey
- Roger Yarbrough
- John Staab
- Charles Deahl
- John R. Olds
- William D. Miteff

DECADE 3 : 1980 - 1989

- Drum Driers for Class I mixes, manufacturing asphalts, recycling, Preventive maintenance, seal coats, emulsion stabilized overlays
- Slurry seals, asphalt content determination, Emulsion technology, cold millings in base, Micro surfacing, pavement management for cities and counties

1980 - 1989

- Asphalt Treated Bases
 - Open graded base mixtures, Plant cold mix surfaces and bases
- Overivews
 - State and Federal perspective on bituminous construction, new mixture initiatives
- Pavement Design
 - Mechanistic design for full depth
- Recycling
 - Edens Expressway experience, cold recycling, reclaimed asphalt pavement (RAP) quality control, determining rehab strategies, cold millings in base, hot in place recycling

1980 – 1989 cont

- Construction
 - Asphalt content by nuclear gauge, current compaction practices, thin overlays in cities, new developments in equipment,
- Safety
 - Friction characteristics,
- Performance
 - New specs for interstate overlays, percent passing for Class I mixes, fingerprinting asphalts, heavy duty large stone mixtures,
- Rehabilitation
 - Preventive maintenance, Sprinkle treatments, reflective crack control, Cracking and Seating prior to overlay

1980 – 1989 People

- Eric Harm
- Steven Decker
- Ed Monoscalco
- Jack Renner
- Frank Van Matre
- Ronald Mount
- Christine Johnson
- Paul Davidsmeyer
- Jack Haydon
- John Huffman
- James Scherocman
- Harold Monroney
- Jay Miller
- Robert Bailey
- Marvin Traylor
- S. M. Acott
- P. G. Lavin
- Tom Ritschell
- John Ebers

DECADE 4 : 1990 - 1999

- Big Rock Pavements, IDOT quality management, modified asphalts, PCC pavement rehab, Livingston Co. granular base study, plant and paving start up problems, parking lot, I-57 experimental sections, full depth construction, performance based specs
- Longitudinal joint construction, Georgia's non-conventional mixtures, slurry seals, Dev. and Imp. of warranty specs. Future of QC/QA in Illinois, IDOTs outlook and funding

1990 - 1999

- **Construction**

- Segregation, paving for quality and smoothness, longitudinal joints, improvements in asphalt paving equipment, asphalt content by ignition oven, update on longitudinal joint construction, how to get density, paver produced segregation

- **Overivews**

- IDOTs bituminous program, state funding outlook

- **Advances**

- Big Rock Mixes, multigrade asphalts, I-57 research sections, European experiences, SMA demo project, crumb rubber modifier technology, new mixtures for Indianapolis, issues in modifying asphalts, Georgia's non conventional mixtures, the Superpave gyratory compactor

1990 – 1999 cont.

- **Mix Control**

- Quality management program, QC/QA program –IDOT and contractors commitment, QA/QC – Federal and contractors perspective,

- **Rehabilitation**

- Ohio's PCC rehab program, strategies for old PCC rehab, concrete pavement rubblization, recycling surfaces into stabilized bases,

- **Maintenance**

- Parking lot maintaining, ins and outs of crack sealing, surface treatments and their performance, chip seals on high traffic roads, Improved pothole patching techniques, slurry seals

1990 – 1999 : People

- Ron Cominsky
- James Gehler
- Anthony Kreich
- Ned Becthold
- Dick Lyons
- Gonzalo Rada
- John Sullivan
- Michael Heitzman
- Paul Curren
- Dan Ratermann
- Ronald Collins
- Richard Wolters
- Douglas Hanson
- Charles Adams
- Scott Shuler
- John Bukowski
- Tom Harmon
- Don Brock
- Robert Mcgennis
- Kirk Brown
- Mark Rademaker
- Gerald Huber

DECADE 5 :2000 - 2009

- Perpetual pavements, mixture selection, quality construction, new equipment, end result specifications, IDOT updates
- Warm mix asphalt, polymer supply, funding, fraud, the true N-Design, centerline joint preservation, safety issues, Pay 4 Performance

2000 - 2009

- **Construction**

- Perpetual pavements, quality construction – right and wrong, new equipment, end result specification, pavement type selection, paver induced segregation, reducing permeability, HMA workmanship, Intelligent compaction, warranties, Antigo rubblization experience

- **Overviews**

- IDOT update, Local Roads update, SAFTEA-LU, Build Illinois, early retirement

- **Field Studies**

- I-70 reconstruction, perpetual pavements on I-165, I-88
Regan extension: Rubblization, Indianapolis motor speedway rehab

2000 - 2009

- **Mix Technology**

- HMA selection in Illinois, HMA for subdivisions, 4.75mm Superpave mix, 4.75mm sand asphalt mix, warm mix asphalt, HMA in railroads, Gyrotory N Design

- **Asphalt Binders**

- Production, what's in your binder, colored binders

- **Rehabilitation**

- Fog seals, surface treatments, pavement preservation, Illinois' recycling initiative, preserving our pavement investment, investing in RAP usage, Fulton County pavement preservation, economics of recycling

200 - 2009

- Safety
 - Work zone safety, reducing risks, Work Zone safety update,

2000 – 2009 : People

- Tim Murphy
- Laura Shanley
- Gayle King
- Christine Reed
- Debbi Marks
- Jim Trepanier
- Gerald Huber
- Tom Deddens
- Kevin Burke
- Larry Galehouse
- Charles Weinrank
- Mark Swanlund
- Fred Garrott
- Victor (Lee) Gallivan
- Tim Aschenbrenner
- LaDonna Rowden
- Aron Toliver
- Hal Wakefield
- W. G. Buttlar
- William Pine
- Wayne Jones
- William Vavrik
- Chris Piche
- Roger Driskel

50 YEARS OF BITUMINOUS PAVING

- Similarities in topics
- Changes in materials
- Advances in equipment capabilities
- New technologies

- New People and Ideas.

DECADE 6 : 2010 - 2019

- What are the topics in coming years?
- What will you contribute?
- Will you participate?

- Continue the tradition of excellence, and progress.