International Conference on Best Practices for ULTRATHIN and THIN Whitetoppings

TECHNICAL PROGRAM AND REGISTRATION INFORMATION

SPONSORED BY
Federal Highway Administration, Colorado Department of Transportation, American Concrete Pavement Association, Transportation Research Board, and International Society for Concrete Pavements
BACKGROUND

Whitetopping is referred to as the resurfacing of an existing distressed asphalt pavement with concrete. Conventional whitetopping (conventional concrete pavement placed directly over an existing asphalt pavement) has a long history of use, and the practice is well established. However, the whitetopping techniques that depend on the bond between the concrete resurfacing and the existing asphalt pavement surface (typically milled) are of recent origin and involve thinner concrete resurfacing and different jointing patterns. The bonded whitetoppings are categorized as ultrathin whitetopping (UTW), concrete surface thickness ranging from 51 to 102 mm (2 to 4 in), and thin whitetopping (TWT), concrete surface thickness ranging from 102 to 152 mm (4 to 6 in).

The first UTW demonstration project in the United States was constructed in 1991. Since then, the use of UTW and TWT has exhibited significant growth in the United States and in other countries. For specific applications and service life requirements, well-designed and well-constructed UTW and TWT appear to provide satisfactory performance. This conference, organized as part of the Federal Highway Administration’s Concrete Pavement Technology Program, will provide an international forum to review the progress in UTW and TWT technologies since 1992 and to help identify the best practices for candidate project selection and design, construction, and repair of UTWs and TWTs.

SCOPE

This Best Practices conference is targeted at pavement engineering and construction professionals who are involved in various aspects of pavement design, construction, testing and evaluation, and rehabilitation. These professionals include Federal, State, and municipal engineers, consulting engineers, contractors, materials-suppliers, and academia. The conference program will consist of presentations and discussions on new developments related to UTW and TWT technologies (but not conventional whitetopping technology) and lessons learned over the last decade in the use of these technologies. Implementable design, construction, and repair techniques that result in long-lasting UTW and TWT will be the focus of the conference. This conference will be of special interest to municipal engineers and related professionals who are using or contemplating the use of UTW and TWT. There will also be a session directed at airfield applications.
PRELIMINARY TECHNICAL PROGRAM

TUESDAY, APRIL 12, 2005

RECEPTION 6:00 p.m.

WEDNESDAY, APRIL 13, 2005

REGISTRATION AND BUFFET BREAKFAST 7:00 a.m.

PLENARY SESSION 8:30 – 10:00 a.m.
Moderator: Tim Aschenbrener,
Colorado Department of Transportation, Denver, CO

- WELCOME & COLORADO DOT’S CONCRETE PAVEMENT PROGRAM
  Craig Siracusa, Chief Engineer,
  Colorado Department of Transportation, Denver, CO

- WELCOME & FHWA’S CONCRETE PAVEMENT TECHNOLOGY INITIATIVES
  Tommy Beatty, Director of Office of Pavement Technology,
  Federal Highway Administration, Washington, DC

- ULTRA-THIN WHITETOPPING EVOLUTION
  Gerald Voigt, President, American Concrete Pavement Association,
  Skokie, IL

- WHITETOPPING EXPERIMENTS IN COLORADO
  Ahmad Ardani, Pavement Research Engineer,
  Colorado Department of Transportation, Denver, CO

BREAK 10:00 a.m.

SESSION 1: THE COLORADO EXPERIENCE 10:30 – 12:00 Noon
Moderator: Ron Youngman, American Concrete Pavement Association CO/WY Chapter, Denver, CO

- LIFE CYCLE COST ANALYSIS OF THIN WHITETOPPING
  Greg Lowery, Colorado Department of Transportation, Denver, CO
• COLORADO STATE HIGHWAY 83 PARKER ROAD THIN WHITETOPPING PROJECT
  Jeffrey Allen, Colorado Department of Transportation, Denver, CO

• SH 121 (WADSWORTH BLVD.) WHITETOPPING PROJECT C-470 TO PARKHILL AVENUE
  Kevin Sullivan, Colorado Department of Transportation, Denver, CO

• ULTRA-THIN WHITETOPPING AT THE FIRST CHRISTIAN CHURCH AND LOUCKS STREET
  Ron Youngman, American Concrete Pavement Association CO/WY Chapter, Denver, CO, and Randy Bomar, TSP, Inc., Sheridan, WY

BUFFET LUNCH  Noon

SESSION 2: INTERNATIONAL EXPERIENCES AND STUDIES  1:30 – 3:00 p.m.

• PERFORMANCE OF WHITETOPPING TRIAL AT DETROIT-WINDSOR BORDER CROSSING, HIGHWAY 3 AT WINDSOR, ONTARIO
  Tom Kazmierowski, Ontario Ministry of Transportation, Downsview, Ontario, Canada; Susanne Chan, Ontario Ministry of Transportation, Downsview, Ontario, Canada; and Maria Bianchin, Ontario Ministry of Transportation, Downsview, Ontario, Canada

• DYNAMIC BEHAVIOR OF ULTRA-THIN WHITETOPPING STRUCTURE WITH HIGH STRENGTH CONCRETE UNDER TRAFFIC LOAD
  Tatsuo Nishizawa, Ishikawa National College of Technology, Japan; Hiroyuki Obata, Taiheiyo Cement Co., Japan; Iwao Sasaki, Public Work Research Institute, Japan; and Katsuro Kokubu, Tokyo Metropolitan University, Japan

• REFLECTIVE CRACK PROBLEM ON WHITETOPPING AND ITS REPAIR
  Jiwon Kim, Total Pave System Co., Ltd., South Korea, and Yoon-Ho Cho, Chung-Ang University, South Korea
• KEY FINDINGS FROM NCHRP SYNTHESIS OF HIGHWAY PRACTICE 338: THIN AND ULTRA-THIN WHITETOPPING
Robert Otto Rasmussen, The Transtec Group, Inc., Austin, TX, and Dan K. Rozycki, The Transtec Group, Inc., Austin, TX

BREAK

SESSION 3: REGIONAL EXPERIENCES 1
Moderator: Sam Tyson, Federal Highway Administration, Washington, DC

• UTW IN CALIFORNIA AND NEVADA – A 14-YEAR PERFORMANCE PERSPECTIVE OF PERFORMANCE BASED ON JOINT SPACING, THICKNESS, AND TRAFFIC
David Akers, California Nevada Cement Promotion Council, San Diego, CA, and Rich Warren, Southern Nevada Concrete and Aggregate Association, Las Vegas, NV

• ULTRA-THIN OVERLAYS, STANDING THE TEST OF TIME
James Cable, Iowa State University, Ames, IA

• 8TH STREET ULTRA-THIN WHITETOPPING ON ASPHALT RECYCLED CTB AND AT VARIOUS INTERSECTIONS
Randy Bomar, TSP, Inc., Sheridan, WY; Ron Youngman, American Concrete Pavement Association CO/WY Chapter, Denver, CO; and Bill Suchor, Suchor Construction, Gillette, WY

• PERFORMANCE OF FLORIDA’S FIRST WHITETOPPING PROJECT
Jamshid Armaghani, Florida Concrete & Products Association, Gainesville, FL, and Roger Schmitt, Florida Department of Transportation, Gainesville, FL

GROUP DINNER

6:00 p.m.
THURSDAY, APRIL 14, 2005

BUFFET BREAKFAST 7:00 a.m.

SESSION 4: UTW/TWT TESTING 8:30 – 10:00 a.m.
Moderator: Michael Ayers, American Concrete Pavement Association, Skokie, IL

- ANALYSIS OF COMPOSITE PAVEMENTS UNDER MOVING AND STATIC WHEEL LOADS FROM A HEAVY VEHICLE SIMULATOR
  Wasantha Kumara, University of Florida, Gainesville, FL; Mang Tia, University of Florida, Gainesville, FL; Chung Lung Wu, MACTEC Engineering and Consulting, Inc., Alpharetta, GA; and Bouzid Choubane, Florida Department of Transportation, Gainesville, FL

- BEHAVIOR OF UTW OVER COMPOSITE PAVEMENTS EXPOSED TO FULL SCALE ACCELERATED LOADING
  Scott Newbolds, Indiana Department of Transportation, West Lafayette, IN; Khaled Galal, Virginia Transportation Research Council, Charlottesville, VA; Jan Olek, Purdue University, West Lafayette, IN; and Tommy Nantung, Indiana Department of Transportation, West Lafayette, IN

- BEST PRACTICES FOR THE DESIGN AND REPAIR OF THIN AND ULTRA-THIN WHITETOPPING BASED ON MN/ROAD FINDINGS
  Julie Vandenbossche, University of Pittsburgh, Pittsburgh, PA

- FORENSIC INVESTIGATION OF ULTRA-THIN WHITETOPPING TEST SECTIONS AT THE MN/ROAD PROJECT
  Tom Burnham, Minnesota Department of Transportation, Maplewood, MN

BREAK 10:00 a.m.

SESSION 5: UTW/TWT RESEARCH AND DEVELOPMENT 10:30 – Noon
Moderator: Julie Vandenbossche, University of Pittsburgh, Pittsburgh, PA
• NECESSITY OF EXISTING PAVEMENT EVALUATION IN SUCCESSFUL UTW IMPLEMENTATION

• INCORPORATION OF PROBABILISTIC CONCEPTS INTO FATIGUE ANALYSIS OF ULTRA-THIN WHITETOPPING AS DEVELOPED FOR THE AMERICAN CONCRETE PAVEMENT ASSOCIATION

• RESULTS FROM CONCRETE PAVEMENT TECHNOLOGY PROGRAM TASK 3 PROJECT ON THE PERFORMANCE AND DESIGN OF WHITETOPPING OVERLAYS ON HEAVILY-LOADED PAVEMENTS
Robert Otto Rasmussen, The Transtec Group, Inc., Austin, TX

• RESULTS OF A FORENSICS EVALUATION OF THE UTW OVERLAYS AT THE FHWA ALF CONDUCTED UNDER CONCRETE PAVEMENT TECHNOLOGY PROGRAM 5
Robert Otto Rasmussen, The Transtec Group, Inc., Austin, TX; J. Mauricio Ruiz, The Transtec Group, Inc., Austin, TX; and James Sherwood, Federal Highway Administration, McLean, VA

BUFFET LUNCH  Noon

SESSION 6: REGIONAL EXPERIENCES 2  1:30 – 3:00 p.m.
Moderator: Jamshid Armaghani, Florida Concrete and Products Association, Gainesville, FL

• RHODE ISLAND EXPERIENCE WITH WHITETOPPING OF A DOWN-SLOPE SIGNALIZED INTERSECTION
Colin Franco, Rhode Island Department of Transportation, Providence, RI, and Michael Sock, Rhode Island Department of Transportation, Providence, RI
• WHITETOPPING: ATYPICAL IS TYPICAL!

• THIN CONCRETE OVERLAYS OF COMPOSITE PAVEMENTS IN MICHIGAN
Kerry Sutton, Michigan Concrete Paving Association, Okemos, MI, and Robert Risser, Michigan Concrete Paving Association, Okemos, MI

• REPAIR OF ULTRA-THIN CONCRETE OVERLAYS – AN OVERVIEW
Steve Waalkes, American Concrete Pavement Association, Skokie, IL

BREAK

SESSION 7: AIRPORT APPLICATIONS
Moderator: Jim Lafrenz, American Concrete Pavement Association, Washington, DC

• OVERVIEW OF THIN WHITETOPPING APPLICATIONS AT AIRPORTS
Jim Lafrenz, American Concrete Pavement Association, Washington, DC

• THIN WHITETOPPING JET PORT CONCRETE APRON AT CENTENNIAL AIRPORT
Jim Flurhr, Carter & Burgess, Denver, CO, and Ron Youngman, American Concrete Pavement Association CO/WY Chapter, Denver, CO

• THIN WHITETOPPING AT FERNANDINA BEACH AIRPORT
Jamshid Armaghani, Florida Concrete and Products Association, Gainesville, FL, and Roland Luster, Florida Department of Transportation, District 2, Gainesville, FL

• CONFERENCE SUMMARY AND FUTURE DIRECTIONS
Shiraz Tayabji, Construction Technology Laboratories, Inc., Columbia, MD

END OF CONFERENCE
CONFERENCE STEERING COMMITTEE

Ahmad Ardani, Chair; Colorado Department of Transportation

Mike Ayers, American Concrete Pavement Association

Tom Harman, Federal Highway Administration

Bernie Kuta, Federal Highway Administration

Kurt Smith, Applied Pavement Technology, Inc.

Shiraz Tayabji, Construction Technology Laboratories, Inc.

Sam Tyson, Federal Highway Administration

Julie Vandenbossche, University of Pittsburgh

Ron Youngman, Colorado-Wyoming Chapter, American Concrete Pavement Association

CONFERENCE HOST

The Colorado Local Technical Assistance Program (LTAP) will host the conference, providing registration and logistical support. Visit the Colorado LTAP’s Web site at http://ltap.colorado.edu for details.

The Colorado LTAP is sponsored by the Federal Highway Administration, the Colorado Department of Transportation, and the University of Colorado at Boulder.

FOR ADDITIONAL INFORMATION, CONTACT:

Shiraz Tayabji, Construction Technology Laboratories, Inc., 5565 Sterrett Place, Suite 312, Columbia, MD 21044 USA

Phone: 410-997-0400; Fax: 410-997-8480, e-mail: stayabji@ctlgroup.com

WHAT IS LTAP?

The Local Technical Assistance Program (LTAP) and Tribal Technical Assistance Program (TTAP) help local transportation agencies learn about improving and maintaining their roads, using innovative methods and materials, and finding ways to work smarter. LTAP is a national network of 57 technology transfer centers serving local governments, with a center in each State and in Puerto Rico and six regional centers serving tribal governments. LTAP’s mission is to foster a safe, efficient, environmentally sound transportation system by improving the skill and knowledge of local transportation providers through training programs, demonstrations, an information clearinghouse, technology updates, personalized technical assistance, and newsletters.

The LTAP network is funded by the Federal Highway Administration and matching funds from State governments, universities, State highway agencies, and other organizations.
The Hotel Denver Tech Center is conveniently located to many attractions:

Colorado History Museum  Invesco Field at Mile High
Coors Brewery  Museum of Natural History
Coors Field  Pepsi Center
Denver Art Museum  Six Flags Elitch Amusement Park
Denver Zoo  and more.
Elitch Gardens

CONFERENCE HOTEL

The conference will be held at the Hotel Denver Tech Center in Englewood, Colorado, located in the heart of the Denver Tech Center and Greenwood Village. Just minutes from downtown Denver, the hotel has easy freeway access to I-25 and is only 35 minutes from Denver International Airport. A room block has been reserved for conference attendees at a discounted rate of US $89.00, single or double occupancy, plus occupancy taxes of 9.95 percent (subject to change without notice).

To ensure receiving the special convention rate, individuals should call the hotel directly at 303-779-6161 or 800-327-2242 or e-mail reservations@hoteldtc.com by March 29, 2005, and must identify themselves as being with the “Concrete Conference” when making their reservations. E-mails must include the following:

- Request for the Concrete Conference rate
- Arrival date, departure date
- Number of rooms, request king bed or two double beds (this is a request)
- Number of adults per room
- Request smoking or nonsmoking (this is a request)
- Address and phone
- Credit card type, number, and expiration date

A credit card is required at the time of booking to guarantee reservations. To avoid penalties, cancellation must be made 24 hours in advance of arrival.

Please reserve your rooms as early as possible. Once the room block is filled, the discounted room rate, or a room at the hotel, may not be available.

Denver is one of the most exciting young cities in the Nation, with three new sports stadiums and more than a billion dollars in new attractions—from a world-class aquarium to massive downtown entertainment complexes. And the Rocky Mountains, one of the Nation’s most popular vacation destinations, are right next door for pre- and post-conference visits.
CONFERENCE REGISTRATION FORM

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COMPANY NAME

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CITY, STATE ZIP

COUNTRY

PHONE FAX

E-MAIL ADDRESS

☐ I require auxiliary aids or services due to a disability. Please contact me at the above address.

FEES–CHECK ONE

By February 15, 2005:  
☐ $200 General registration
☐ $150 Government and academia (U.S. only)
☐ $150 Authors and presenters
☐ $100 Students

After February 15, 2005:  
☐ $250 General registration
☐ $200 Government and academia (U.S. only)
☐ $200 Authors and presenters
☐ $150 Students

Payment must accompany registration. Registrations without payment will not be processed.

Cancellation Policy: Registration refund will be made only if cancellation is received by March 15, 2005.

☐ Check/Money order enclosed payable to University of Colorado $________

☐ Visa ☐ Mastercard $________

Note: Colorado Local Technical Assistance Program will appear as the charging organization on credit card statements.

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