Caltrans establishes a Pavement Preservation Center at Chico State

With an aging infrastructure and growing economic constraints, systematic infrastructure preservation has become a key to overcoming the challenges of the rapid deterioration of roads. This proactive system can prolong the life of the infrastructure and postpone expensive rehabilitation and reconstruction.

The California Pavement Preservation Center (CP2 Center), established by Caltrans and located at California State University, Chico, is providing a focused look at the practical applications of pavement preservation by developing partnerships with highway agencies, universities and industry, as well as with other regional and national centers. It provides unique technical assistance for those in need of related pavement preservation services by offering:

- expertise and exposure to national and international knowledge on pavement preservation
- fast-track technology transfer by training and deployment of pavement preservation innovations
- timely solutions to pavement preservation issues
- solutions to overcome agency challenges and business practices
- solid working relationships and partnerships with industry, academia and other public agencies
- credible technical advice and consultations on pavement preservation issues.

The Center was established on campus at California State University, Chico, in July 2006 with funding from Caltrans. Initially, it is located in the Civil Engineering building (Langdon Hall); however, later it will be co-located with the concrete industry management program and the plastics center currently in Langdon Hall. At present, the Center is managed by an administrative director and a chief technical director. Within one year, it is expected to include two full time pavement preservation engineers, a laboratory technician, and an administrative assistant. Though Caltrans is currently the major contributor to the Center, plans are underway to raise additional funds from industry and from the federal government to help support the Center activities to expand to serve our other partners in pavement preservation.

Expected benefits of the Center:

- Provide readily accessible expertise and knowledge
- Act as a credible third party on pavement preservation issues
- Promote the deployment of innovation and technology transfer-thinking “outside the box”
- Streamline the contracting and the business practices for pavement preservation guidance
- Enhance safety by promoting proper and durable strategies that result in decreased exposure to traffic by workers, and fewer hazards to the motorist
- Increase efficiency with the use of the proper timing of strategies and quantifying performance and cost of pavement preservation strategies to delay pavement rehabilitation
- Act as a persistent advocate for the goals of preservation, innovation, safety and serviceability
- Provide measurable accomplishments and usable products
- Act as a good steward of resources; work with partners.

What has been happening at the Center?

A strategic planning meeting was held in August 2006 with the Pavement Preservation Task Group (PPTG), a partnership between Caltrans, industry, FHWA, local agencies, and academia. The results of the meeting formed the 6 task orders that the Center will work on during its first 3 years.

A kickoff meeting took place at CSU, Chico, in September 2006 to inform our partners in the PPTG and others that we are in business to work on the task orders.

Interim offices for the Center are currently located in Langdon Hall, room 203. As additional staff is hired new space will be located on campus.

Academic programs in pavement preservation were launched with a course in pavement preservation, offered in the fall, 2006. Industry actively participated in the course by providing lectures on...
pavement preservation treatments. We are currently working on the development of a certificate program in pavement preservation and the Center is planning to teach a course in asphalt technology in the fall of 2007.

A center Web site and marketing documents are up and running, and a brochure has been drafted. Please check out our Web site at www.cp2info.org/center. Your feedback on the Web site is welcome.

Fund-raising activities continue. Because our initial funding comes from Caltrans to provide services to Caltrans, the Center is actively soliciting other funds to provide the needed support to our other partners, industry and local agencies. We have already received a substantial gift from one industry partner and are expecting others to help with support. We are in the 5-year plan for the California Integrated Waste Management Board to provide similar services to local agencies on pavement preservation treatments containing recycled tires. Finally, we are actively pursuing other funding opportunities with the state legislature and with the federal government to help expand our support to local agencies.

Partnerships with other centers and agencies are being fostered. We cooperated with the National Center on Pavement Preservation (NCPP) at Michigan State University to be a partner in a FHWA Recycling Center.

Documenting the benefits of pavement preservation is in full swing. We are working with UC Davis and MACTEC on this task. UC Davis is working with Caltrans data and MACTEC is working with data from local agencies. The Center will be working with the Western Pavement Preservation Partnership (WPPP) to help identify the benefits of pavement preservation treatments using their data.

A pavement preservation Task Group (PPTG) meeting was held in Lodi, California, on February 7, 2007. Please look at the agenda and the presentations on the PPTG Web site www.cp2info.org/task-group.

What is being planned?

Full funding for the Center came in effect in late January 2007. Planned activities for the rest of this year include initiating work in each of the tasks identified in the strategic planning meeting and included in the contract between Caltrans and CSU, Chico.

Task 1 – Identify benefits of pavement preservation: Continue to work with UC Davis and MACTEC on this activity. A report is due at the end of the calendar year. We also plan to work with the Western Pavement Preservation Partnership (WPPP) on this task.

Task 2 – Training and education: Identify training needs through a survey of the Caltrans District Maintenance Engineers (DME’s) and the PPTG. The Metropolitan Transportation Commission (MTC) and the Maintenance Superintendents Association (MSA) will be solicited for input on training needs. We will also work with Caltrans and the PPTG to develop training for the use of the Caltrans’ Maintenance Technical Advisory Guide (MTAG) for both flexible and rigid pavements.

Task 3 – Pavement performance improvement: The initial work in this task will be to work with Caltrans and the PPTG to update the MTAG for both flexible pavements and to finalize the MTAG for rigid pavements. We will be working with the PPTG to estimate treatment lives and life extension for the various pavement preservation treatments used in California.

Task 4 – Innovation and new technologies: The Center will work with Caltrans and the PPTG to document the results of innovative studies on a variety of flexible and rigid pavement preservation treatments. Many of the innovative treatments being tracked by Caltrans are identified in one of the presentations at the PPTG meeting in Lodi (see the PPTG Web site). We will also create a database to store all the important information.

Task 5 – Technical assistance: The Center will assist Caltrans with failure investigations and the PPTG in the development of new and improved specifications.

Task 6 – Effective pavement preservation practices: The Center will promote the use of pavement preservation practices to Caltrans and local agencies through participation in meetings, preparing short articles on pavement preservation, and through the distribution of a periodic newsletter and marketing materials. Most of this material will also reside on the Center Web site.
We need your help

The Center is actively recruiting a senior pavement preservation engineer. If you have suggestions for the pavement preservation engineers, please let us know. Our contact information is given below.

We will be soliciting ideas for needed training in the pavement preservation area. This could include training on any of the following topics:

- Pavement preservation 101
- Treatment selection
- Individual treatment design, construction and placement
- Materials used in asphalt treatments
- Materials used in concrete treatment

Let us know what you need, including the desirable length of class. We will be sending a survey form soliciting more detailed information on this topic to the PPTG and to Caltrans.

As mentioned above, we are actively soliciting additional funding to help us provide our list of services to industry and local agencies. Let us know if you want to help with this effort.

Upcoming events

Following are some upcoming events. If there are some we have overlooked, please let us know. We will be including a calendar of pavement preservation related events on our Center Web site.

WASHTO (Western Association of State Highway and Transportation Officials) Sub Committee on maintenance
South Lake Tahoe
March 5 – 7, 2007
www.washto.org
Contact: Linda Barnard

WASHTO Committee on Materials
San Diego, CA
April 3 – 5, 2007
www.washto.org
Contact: Kim Bailey

California Pavement Preservation Conference
Union City California
April 11 – 12, 2007
www.cp2info.org/conference
Contact Laura Melendy

Contact information for the center

For more information on the Center, please feel free to contact any of the following:

Dr. Tom Ferrara P.E. Director
CP2 Center
203 Langdon Hall
CSU, Chico 95959-0930
530-898-5329
tferrara@csuchico.edu

Dr. R. Gary Hicks, P.E. Technical Director
CP2 Center
203 Langdon Hall
CSU, Chico 95959-0930
530-898-5981
rghicks@CSUchico.edu

Dr. Shakir Shatnawi, P.E. Chief
Office of Pavement Preservation
California Department of Transportation
5900 Folsom Blvd
Sacramento, CA 95819
916-227-5706
shakir_shatnawi@dot.ca.gov

Preserving the pavement allows motorists to enjoy our diverse California landscapes.