

California Pavement Preservation (CP2) Center Update

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Topics to be Covered

- **California Pavement Preservation (CP2) Center**
- **Task Orders**
- **Selected Accomplishments**
- **Benefits of the Center**
- **Future plans**
- **Summary**

CP2 Center Update

- Caltrans established the California Pavement Preservation Center on July 1, 2006
- Purpose is to accommodate the needs for pavement preservation services to governmental agencies and industry



CENTER OBJECTIVES

- **Serve as a technical resource for pavement preservation activities within the state of California.**
- **Educate others about the benefits of pavement preservation in partnership with the Caltrans and industry.**
- **Enhance pavement preservation knowledge through research and training.**
- **Advise and assist others to establish a pavement preservation program.**



CENTER'S GOALS/SERVICES

- **Credible 3rd party for Caltrans, local agencies and industry**
- **Experts in evaluation of new products and innovation in pavement preservation**
- **Partners in conducting pavement preservation research and implementing practical findings**
- **Promoting useable pavement preservation tool**

MEASURES OF SUCCESS

- Quality of educational & outreach programs
- Technical assistance provided
- Implementation of research and new technologies
- Successful internship and rotational programs
- Improvements in the pavement preservation process



INITIAL WORK PLAN – A PARTNERING PROCESS

- **Strategic planning meeting held August 29-30, 2006**
- **Identified the major issues/challenges facing the pavement preservation industry in California**
- **Developed a practical vision for the center for the first 3 years**
- **Prioritized issues based on need and value added**
- **Charted a roadmap for the Center for 2007-09**

TASK 1: DETERMINE AND DEMONSTRATE BENEFITS OF PAVEMENT PRESERVATION

- **Actions**
 - Track performance of existing strategies
 - Determine/document benefits
 - Conduct LCCA
- **Deliverables**
 - Report to document benefits of pavement preservation
 - White paper for decision makers



Benefits of Pavement Preservation

- **Purpose-identify the benefits of pavement preservation**
- **Focus initially on economic, but identify others. Is it a 6:1 benefit or something else?**
- **Joint effort between the Center, UC Davis, and MACTEC**

Efforts Included

- **Collection of pavement performance data for state and local agencies using PMS data**
- **Identify the life extension if possible for the various treatments**
- **Focus on flexible pavements initially**
- **Conduct LCCA**

Preliminary Findings

- **For local agencies, the LCCA savings when using pavement preservation is exceeds 20%**
- **For Caltrans, the LCCA savings when using pavement preservation is in the range of 20-50 %**
- **Additional work is needed using other sources of good PMS data**

Future Work

- **This effort was completed at the end of 2007**
- **Reports documenting the savings for local agencies and Caltrans have been developed and are under review**
- **A white paper summarizing the findings has been developed and is under review**

TASK 2: PROVIDE TRAINING AND EDUCATION

■ Actions

- Develop training sessions on the MTAG
- Develop training sessions on the importance of pavement preservation
- Develop presentations for decision makers
- Assist Caltrans in planning & conducting an annual conference on pavement preservation

■ Deliverables

- Training sessions and workshops on the above
- Annual conference (www.cp2info.org/conference)



ANNUAL PAVEMENT PRESERVATION CONFERENCE

- **Conference Initiated in 2006**
- **Held every year, alternating between northern and southern California**
 - **2006- Diamond Bar**
 - **2007- Union City**
 - **2008- Newport Beach**

Planning for Conferences

- **PPTG effort**
- **Members include representatives from**
 - **Caltrans**
 - **Industry**
 - **FHWA**
 - **Local agencies**
 - **Academia**

Topics Covered

- **Importance of pavement preservation**
- **Integrating pavement preservation into PMS**
- **Strategy selection**
- **Maintenance techniques**
- **Case histories**
- **Lessons learned**
- **And much more**

Plans for the 2009 conference are underway

Measures of Success

- **Conference attendance exceeded 300 in the first 2 years**
- **Attendees included representatives of all participating groups**
- **Presentations are posted on the conference website and used**
- **Evaluations have been very good**
- **Plans are underway for the 2009 conference**

TASK 3: IMPROVE PAVEMENT PRESERVATION PERFORMANCE

■ Actions

- Update the MTAG for Flexible and Rigid pavements
- Improved consistency through improved QC/QA
- Define industry standards for various treatments
- Update specifications to improve product quality



■ Deliverables

- Updated guides and associated training
- Improved inspections procedures (guides and checklists)
- Updated trigger values for selecting treatments
- Develop performance curves for treatments
- Updated specifications for treatments

Caltrans Industry Joint Training

- **MTAG for flexible and rigid pavements were updated in 2007**
- **Training modules were being developed for both the flexible and rigid MTAGs**
- **Modules are being developed jointly by Industry, MACTEC and the Center**
- **Training begin in March 2008**

Topics Covered

- **Introduction to pavement preservation**
- **Materials for pavement preservation**
- **Distress appropriate for preservation**
- **Strategy selection**
- **Important surface characteristics**
- **Discussion of individual treatments**

Treatments Covered for Rigid Pavements

- **Crack sealing**
- **Diamond grinding**
- **Partial depth spall repair**
- **Slab replacement**
- **Dowel bar retrofit**

Treatments Covered for Flexible Pavements

- **Crack sealing**
- **Patching**
- **Fog seals**
- **Slurry and micro seals**
- **Chip seals**
- **Thin hot mix overlays**
- **Thin BWC**
- **Surface recycling**
- **Interlayers**

Measure of Success

- **Well attended training**
- **Instruction provided by industry and Center staff**
- **Evaluations were very good.**
- **Attendees plan to take the training back to train their staff**

Next Steps

- **Make needed changes in training materials**
- **Deliver training in SOCAL in the fall of 2008**
- **Take the training statewide and to the districts in 2009.**
- **Post training materials on the Center website**

TASK 4: ENCOURAGE INNOVATION AND TECHNOLOGY TRANSFER

■ Actions

- Streamline the process for implementing innovation and new products
- Work with industry to evaluate new technologies and processes
- Develop/evaluate new performance related tests
- Encourage T2 through dissemination of information



■ Deliverables

- Improved process for innovation
- Reports/memos/ research notes on new technologies, materials, processes and tests
- Technology transfer through various media.

Innovation Process

- **Process to introduce new products established**
- **\$5,000,000 per year provided by the Caltrans Division of maintenance for innovation**
- **Products are being placed statewide and monitored by either the Center or UC Davis**

Current projects being monitored

- **RAC-O-HB projects-Statewide**
- **Fog and Rejuvenating seals-D9**
- **CIR projects-D3**
- **European quite pavement project-D7**
- **Interlayer project-D2**
- **Chip seal projects-D11**
- **Warm mix pavement-D5**

Planned projects

- **HIR project- D2 and D8**
- **Bonded wearing course projects- statewide**
- **Microsurfacing projects- statewide**
- **Chip-seal over fabric- D6**
- **REAS- D11**

Innovative database

- **Data base has been developed to store all the information on the project**
- **Innovation subgroup and the Center developed this**
- **Information will begin to be loaded into the database in the summer of 2008**

TASK 5: PROVIDE TECHNICAL ASSISTANCE

■ Actions

- Conduct pavement reviews on new products and others
- Provide technical consultation on pavement preservation
- Assist with failure investigations and if necessary provide expert testimony to support Caltrans



■ Deliverables

- Reports on failures and pavement reviews
- Technical assistance to Caltrans and the PPTG
- Help desk on pavement preservation

Product work plans and review

- **Developed work plan for the fog and rejuvenation projects**
- **Monitored the interlayer project**
- **Developed work plan for the HIR project and will monitored its performance**

Technical assistance to Caltrans & the PPTG

- **Provided assistance to Caltrans for PPTG meetings and workshops**
- **Work with the PPTG to help with the work assignments**
- **Provide technical support to Caltrans on a number of pavement related issues**

Failure investigations

- **Contacted D2 and D3 to help with AR failures**
- **Worked with local agencies on pavement failures.**
- **Still need to expand this effort by letting agencies know we are available.**

TASK 6: PROMOTE EFFECTIVE PAVEMENT PRESERVATION

■ Actions

- Develop information booth on pavement preservation
- Development of fact sheets, tech briefs and brochures and brochures
- Participation at agency and industry meetings

■ Deliverables

- Participation at major agency and industry meetings
- Marketing materials (newsletter, fact sheets, brochures, advisory guides)
- Development and delivery of presentations
- Maintaining the website



Accomplishments

- **Developed quarterly newsletters**
- **Developed fact sheets and tech briefs**
- **Developed a booth and exhibited it at numerous conferences around the state**
- **Maintain a web site**

Future plans

- **Task orders for 2010 and beyond are being developed**
- **Will fit in the new pavements division**
- **Working with others (FHWA, SHRP, CIWMB, Industry) on national and regional studies**

SUMMARY

- Caltrans established CP² Center on July 1 2006
- Partnered process used to develop work plan
- Center task orders started in January 2007
- Work is underway on all tasks



THANK YOU

The Beginning
Keeping good roads good