

January 22, 2014 Meeting Minutes and Action Items

	<h3>Rock Products Committee (RPC) Meeting</h3> <h4>AGENDA</h4> <p>Date: January 22, 2014 Time: 1:00 PM to 4:00 PM Location: TransLab Auditorium 5900 Folsom Blvd., Sacramento, CA 95819</p>		
<p>Meeting called by: RPC Co-Chairs: Tony Limas, Phil Stolarski, John Stayton and Agustin Rosales</p> <p>Facilitator: Phil Stolarski</p> <p>Attendees: RPC Members (Caltrans, Industry & FHWA)</p> <p>Purpose: Share information related to the activities of the RPC</p>			
Time	Topic	Who	Desired Outcome
1:00 – 1:05	<p>Welcome, Introductions and Review Agenda</p> <p>Action Items from October 30, 2013 Meeting</p>	Phil Stolarski	Member introductions, agreement on agenda, and status of action items
1:10 – 1:30	<p>RPC Co-Chairs Update</p> <ul style="list-style-type: none"> • Industry • Caltrans 	Tony Limas, , Phil Stolarski & Agustin Rosales	Caltrans management update, Industry update and any heads up notice
1:30 – 2:30	<p>RPC Task Group Work Plan Status Updates (15 minutes for each Task Group)</p> <ul style="list-style-type: none"> • Asphalt • Concrete • Pavement Foundations • Pavement Preservation 	<p>Task Group Co-Chairs</p> <p>Peter Vacura Joe Peterson Chuck Suszko Jack Van Kirk Jim St. Martin</p> <p>Dan Speer Amy Fong Chuck Suszko Charley Rea Ron Stickel</p> <p>Amy Fong Dan Speer Chuck Suszko Don Durham Don Vivant</p> <p>Peter Vacura Chuck Suszko Amy Fong Jim Ryan Craig Hennings</p>	<ul style="list-style-type: none"> • Accomplishments in the last quarter • Planned outcomes for next quarter • Any major cross cutting issues as a heads up or lessons learned.

January 22, 2014 Meeting Minutes and Action Items

Rock Products Committee (RPC) Meeting January 22, 2014 AGENDA			
Time	Topic	Who	Desired Outcome
2:30 – 2:40	Break	All	Refreshment
2:40 – 3:30	New Business Items <ul style="list-style-type: none"> • FY 14/15 Proposed Projects • Pavement Research Update 	Task Group Co-Chairs Joe Holland	Share strategic initiatives <ul style="list-style-type: none"> • Educational • Informational
3:30 – 3:50	Round Table	RPC Members	Interaction and discussion of appropriate, cross-cutting issues and reports
3:50 - 4:00	Capture Action Items and Dates Next Meeting on April 16, 2014 from 1 PM to 4 PM at TransLab, 5900 Folsom Blvd., Sacramento, CA 95819	Phil Stolarski	Capture action items Share information

Handouts:

1. October 2013 RPC Meeting Action Items Status Summary
2. January 2014 RPC Management Status Report
3. Meeting Minutes RPC Task Groups Meetings with RPC Co-Chairs December 10, 2013

January 22, 2014 Meeting Minutes and Action Items



Rock Products Committee (RPC) Meeting Minutes and Action Items From Wednesday January 22, 2014 1:00 PM to 4:00 PM

TransLab Auditorium, 5900 Folsom Blvd., Sacramento, CA

Meeting Minutes Outline of Discussion

Meeting started at 1:05 PM:

Meeting opened by Rosales.

Self introductions were made by the RPC members.

Rosales reviewed agenda items

Russ Synder recognized Ron Stickel who became a life member of CalAPA at their annual meeting.

Rosales reviewed the action items from October 30, 2013. Four action items were all completed.

Industry/Caltrans Updates

Industry Update

Limas:

- Industry met this morning and identified two issues for roundtable discussion which are electronic bidding and 4 part specifications.

Caltrans Update

Rosales:

- Rosales introduced Audrie Spears who is responsible for gathering Section 39 Superpave comments. Audrie gave information that Superpave comments are due by February 3, 2014 and that comment resolution table should be used for submitting comments.
- Informed the group that Amy Fong who has been acting Office Chief for Office of Concrete Pavement will be replaced by Nesar Formoli until Bill Farnbach returns.

Nesar Formoli: Introduced himself. He has been working for District 3 for the last 14 years. Is glad to have the assignment working on the Pavement Program in headquarters.

RPC Meeting Minutes 1/22/14 Outline of Discussion Continued

RPC Task Work Plan Status Updates

January 2014 RPC management status report is available at:

<http://www.dot.ca.gov/hq/maint/Pavement/RPC/Workplan.html>

Asphalt Task Group —Comments to “Overall Progress”

Peter Vacura presented the Asphalt Task Group Projects:

Project #8 Section 39 Smoothness

This project is complete based on implementing specification for use of inertial profiler for determining pavement smoothness. Will be reviewing specifications as we are moving forward to determine if any changes are necessary. Smoothness guidelines are being worked on internally. Training will continue.

Project #9 Quieter Flexible Pavement

5th year report has been approved. OGFC mix design has been stalled.

Project#11 Longer Life Flexible Pavement

Long life going forward. Have interviewed contractor and state staff on long life pavement projects.

Project#14 Superpave Specification

Specification is moving forward and the final draft is out for review. Meeting is scheduled for January the 27th.

Project#15 RAP/RAS

Group is Continuing to meet and making progress.

Suszko:

Project# 18 Intelligent Compaction

The non-standard special provision is completed and ready for use on pilot projects. Veda software training workshops are scheduled for February 11, 2014 in Sacramento and February 13, 2014 in Fontana. There are currently 15 people registered for training in Sacramento and 20 registered for Fontana. Sub Task group is now working on FDR/CIR intelligent compaction specification.

Vacura:

Project#20 Asphalt Rubber Binder Quality Control

Sub Task Group has been working on developing specification and meeting will be scheduled for next month.

Project#21 Performance Graded Asphalt Rubber Binder

Work plan is about complete and second round robin testing is going to begin soon.

Project#22 Aggregate Breakdown in Asphalt Concrete Plant

Joe Peterson is working on draft test method being ready in March 2014..

St. Martin: Asphalt Task Group has proposed scoping documents for two new items:

- QC/QA for Superpave
- Type B AC.

January 22, 2014 Meeting Minutes and Action Items

RPC Meeting Minutes 01/22/14 Outline of Discussion Continued

Concrete Task Group — Comments to “Overall Progress”

Dan Speer presented the Concrete Task Group Projects:

Project#5 QC/QA Specification for Cast-in-place Concrete

Half of the pilot projects are in construction. A lesson learned report is being drafted by the Sub Task Group on the pilot projects.

Project#9 Statewide Aggregate Source database

Statewide database is now implemented. DIME data is coming in from the projects.

Project#11 Precast Concrete Pavement

Working on completing standard plans and specifications by the end of the fiscal year.

Rae:

Project#22 Recycled Concrete Materials Specification Development

Sub Task Group is meeting monthly. Environmental document complete, specification is complete, and MPQP issues are being addressed. Owners of the various specifications will have to agree to use of recycled products.

Comments:

Speer: Survey conducted by CALCIMA about aggregate testing has been provided to Caltrans.

Speer: Next year proposed projects for Concrete Task Group are:

- Shotcrete specifications update
- Flexural beam testing of concrete pavement, possibly going to ASTM or AASHTO test method for flex testing.
- Precast is proposing a scoping document for calibration of stressing jacks.

Pavement Foundation Task Group — Additional Comments to “Overall Progress”

Amy Fong presented the Pavement Foundations Task Group projects.

Project#11 Compensation for Ordered Increases in Additives

We have come to a resolution on handling compensation on additives and this will be implemented by NSSP.

Project#12 Intelligent Compaction

As reported earlier the Sub Task Group is now working on the NSSP that will be used on pilot projects.

RPC Meeting Minutes 1/22/14 Outline of Discussion Continued

Pavement Preservation Task Group — Comments to “Overall Progress”

Peter Vacura presented the Pavement Preservation Task Group Projects:

Project#3 Cold In-Place Recycling

CIR has taken a back seat the past three months and nothing has been accomplished. The direction we are heading is to revamp LP 8 for CIR mixes.

Project#4 Fog Seals

Work on additional maintenance placed projects is complete and report by Chico State that summarizes the information from the projects is being reviewed. Information from the report will supplement the issue memo that has been written.

Project#5 Rubberized Slurry Seal

Moving towards a performance criteria specification. Meeting is scheduled for January 31, 2014.

Project #6 Modified Binder Chip Seal

Need to resolve screening sizes to finalize specification. Screenings have been an issue with bicycles.

Project#7 Scrub Seal

Should be resolved at next Seal Coat Sub Task Group meeting on January 31, 2014.

Project#8 Warm Mix asphalt Rubber Chip Seal

Two pilot projects have been completed. We are looking for two more pilot projects.

Fong:

Project#14 Quieter Concrete Pavement

Next generation grind report is completed.

Project#16 Concrete Sealer/Hardener

Data collection has been completed for second year for pilot projects.

Project#17 Concrete Pavement Joint Filler for Wide Joints

Wide joints Sub Task Group held first meeting in November and meeting will be scheduled for next month.

Project#18 Concrete Spall Repair

Moving ahead on gathering information from District maintenance and structures about products that have been used successfully.

Project#19 CRCP Punchout Repair

Draft standard plans and specifications are being circulated for comments.

RPC Meeting Minutes 1/22/14 Outline of Discussion Continued

New Business Items

FY 14/15 Proposed RPC Projects

Rosales:

Expectations

- December meetings held where potential projects were presented by Task Groups
- Limit set for FY14/15 projects to three projects.

Schedule:

Scoping documents need to be submitted in March.

Approval is expected in May-June for scoping documents.

Both Asphalt Task Group and Concrete Task Group included in their earlier presentations the proposed projects for FY 14/15. Now we need Pavement Foundations and Pavement Preservation.

Fong:

Pavement Foundations Task Group

There is one proposed project for establishing specifications for Quality Control for all bases and subbases.

Fong:

Pavement Preservation Task Group

For concrete one project is proposed:

- Review the rapid strength concrete specification.

Ryan:

For asphalt there are two proposed projects:

- Cold-in Place Foam for CIR
- Classification for Warm Mix Additives for Seal Coats

Pavement Research

Joe Holland:

There are two subjects that will be covered today concerning research:

- 1) How does a research project come into being?
- 2) Status of Current Pavement Related Research Projects.

How does a research project come into being?

First handout "3 yr Contract Process" covers the process that Caltrans must go through to get a contract with a university to do research.

To put a research contract together the Division of Research, Innovation and System Information (DRISI) staff talk to State Pavement Engineer, Technical Advisory Panel (TAP) members and DRISI staff about what are the research needs.

UCPRC then gives Caltrans an estimate based on the tasks and potential projects.

When the contract is approved the projects are not approved. Ongoing projects continue but new projects require scope and tasks being approved.

RPC Meeting Minutes 1/22/14 Outline of Discussion Continued

New Business Items Continued

Pavement Research

Joe Holland:

The next handout “Annual Research Project Approval Process” shows the process on how a research project is approved. The Pavement Management Committee acting as the pavement Technical Advisory Panel prioritizes research projects. The Research and Deployment Steering Committee (RDAC) approves projects. Existing projects may be killed by RDAC.

Status of Current Pavement Research Projects

Current Research

- PMS
- Mechanistic Pavement Design: Performance Based Specifications
- Full-Depth Reclamation
- Life-Cycle Analysis of Pavements
- Construction Smoothness Specification and Quality Assurance Process

Pavement Management System

PaveM needed databases to be correlated for reference. The databases that are covered include APCS, GPR, Traffic, As-Built Projects and Bridge information.

APCS and iVision allows engineers to view and have pavement information available for every lane mile. Information is available for every concrete slab and every 30 feet for asphalt concrete.

PaveM Engineering features include:

- Treatment List
- Performance Variables
- Decision Trees
- Performance Models
- Benefits Equations

Long Life Pavement

UCPRC has provided technical support to Caltrans for the recent long life pavement projects in on I-5 in District 2 and I-80 in District 4.

Full-Depth Recycling (FDR)

FDR test sections are being evaluated at UC Davis. Evaluations will include FDR will additives including foamed asphalt, Portland cement and engineered emulsions. The test sections will provide information required for ME Design.

RPC Meeting Minutes 01/22/14 Outline of Discussion Continued

New Business Items

Pavement Research Continued

Pavement Environmental Life Cycle Assessment

Evaluates a product or system throughout its entire life cycle.

Application of Life Cycle Analysis include:

- Develop LCA model for state highway and local networks
- Answer questions about GHG emissions in California
- FHWA guideline for sustainable pavement systems
- FHWA wide-base tires project
- CARB Urban Heat Island Project (AB 296)

Pavement Smoothness

Developed with Caltrans the certification program for Inertial Profilers

Other Caltrans/UCPRC Research Projects

Life Cycle Cost Analysis Manual, Procedures and Training

Quite Pavement Research

Superpave Mix Design Implementation

Design of Asphalt Rubber Materials (AB 338)

Increasing Use of Recycled Pavement Materials (AB 812)

Concrete Materials Early-Age Cracking

Construction Smoothness of Overlays

Open Graded Mix Design

Questions:

Healow: ACPS will it require 50 terabytes?

Holland: Yes

Healow: Who is research lead for early age cracking

Holland: Ongcong Wu is the lead.

Humer: Is the process automated for image interpretation?

Holland: Only human involvement is verification of data not interpretation.

Humer: CalME was focused on mix design by presentation. CalME is based on layers design.

Holland: We are putting together the mix design library for regions of the state for ME.

Vacura: Need to build the materials library so we have the information necessary for design.

RPC Meeting Minutes 1/22/14 Outline of Discussion Continued

Roundtable

Limas: Industry has two questions what is status of electronic bidding and what is four part specifications.

Suszko: E-Bid Status

We are now advertising some projects and opening bids electronically. There are three types of projects that are not electronic bid yet: Additive Biding, informal projects and Cost + Time. Electronic bidding will be on Wednesdays for now. In the future it will be used by all districts on Tuesdays, Wednesdays, and Thursdays. Expect to see all projects electronically bid by mid 2014.

Two Part bid submittal. As we start the electronic bid process we will pilot the two part bid submittal. Intent is to have bids submitted in two parts. Part A is everything you submit today at time of bid opening including subcontractor list. Part B is the completed subcontractor list and any other documents that are required for a responsive bid. Part B will be required within one to two hours after the bids time. Subcontractor info required at time of bid is: Name, Location and type of work. When Part B is submitted it is open to make sure require documents are present before Part A bid is read. If Part B is not complete then bid will not be open.

Suszko: 2015 Four Part Specifications

Four part specification refers to the format that will be used for all technical specifications. Technical specifications will have a minimum of four sections General, Materials, Construction and Payment. General provisions in Divisions I, II and Division X “Materials” will not be four part format.

Following is the Section from 2010/2015 Specifications Style Guide that explains specification organization including four part requirement:

32-2 ORGANIZATION—SECTION HEADINGS

Section 32-2 applies to all sections of *Standard Specifications* and SSPs except the general provisions and some division II sections.²⁰¹⁵

For division II, use the general-provision format for general-provision-type sections and the outline below for more technical specifications. *Use the following outline. The heading level depends on where the specification fits into the section. The headings may be at a lower level from those shown. The organization at the lower levels will be similar.*

XX-X.01 GENERAL

XX-X.01A Summary

XX-X.01B Definitions

XX-X.01C Submittals

XX-X.01D Quality Control and Assurance²⁰¹⁰

XX-X.01D Quality Assurance²⁰¹⁵

XX-X.02 MATERIALS

XX-X.03 CONSTRUCTION

XX-X.04 PAYMENT

RPC Meeting Minutes 1/22/14 Outline of Discussion Continued

Roundtable Continued

Use **General, Materials, Construction**, and **Payment** whether you have text for the section or not. If no specifications are required under a heading, write *Not Used* under the heading.

Use *Summary, Definitions, Submittals*, and *Quality Control and Assurance* if you have text for the section or if you anticipate you may need it in the future (in which case use the heading and write *Reserved* under it).²⁰¹⁰

Use all 4 headings, *Summary, Definitions, Submittals*, and *Quality Control and Assurance* or *Quality Assurance*, if you need at least 2 of these headings. If no specifications are required under a heading in a standard specification, write *Reserved* under the heading. If no specifications are required under a heading in an SSP, write *Not Used* under the heading.^{2010/2015}

Rosales: Any additional comments?

No comments.

Action Items

None.

Meeting adjourned at 3:00 PM.

January 22, 2014 Meeting Minutes and Action Items



Rock Products Committee (RPC)

Action Items

From Wednesday, January 22, 2014

1:00 PM to 4:00 PM

TransLab Auditorium, 5900 Folsom Blvd., Sacramento, CA

Action Items Summary

#	MEETING	ITEM	ACTION REQUIRED	WHO	DUE	STATUS
1.	01/22/14	No Action Items				

January 22, 2014 Meeting Minutes and Action Items

Name	Organization	2012			2013				2014			
		1/18	4/18	7/18	10/17	1/23	4/17	7/17	10/30	1/22		
Philip J. Stolarski	Caltrans State Materials Engineer (Co-Chair)	X	X	X	■	■	X	X	X	■		
Amarjeet S. Benipal	Caltrans State Pavement Engineer (Co-Chair)	X	X	X	X	X	X	X	X ²	X ²		
John Stayton	Caltrans Asst. Chief of Construction (Co-Chair)	X ¹	X ¹	■	X ¹	X ¹	X ¹	■	■	■		
Anthony Limas	Industry-Granite Construction Company, Inc. (Co-Chair)	X	■	X	X	X	X	X	X	X		
Bill Farnbach	Caltrans Pavement Program (Caltrans Member)	X	X	■	X	X	X	■	X ³	X ³		
Chuck Suszko	Caltrans Construction (Caltrans Member)	X	X	■	X	X	X	■	X	X		
Dan Speer	Caltrans Materials Engineering & Testing Services (Caltrans Member)	X	■	X	X	■	X	■	X	X		
Joe Peterson	Caltrans Materials Engineering & Testing Services (Caltrans Member)	X	X	X	X	■	■	X ⁵	■	■		
Roberto Lacalle	Caltrans Structures Specifications and Estimating (Caltrans Member)	X	X	X	■	X	■	X	X	X		
Peter Vacura	Caltrans Pavement Program (Caltrans Member)	X	X	X	X	X	X	X	X	X		
Steve Healow	FHWA Pavement Engineer (FHWA)	X	■	X	X	X	X	X	X	X		
Ron Stickel	Teichert Materials (Industry Member)		X	X	X	X	X	■	X	X		
Charley Rea	CALCIMA (Industry Member)	X	X	X	X	X	X	X	X	X		
Cliff Ohlwiler	Oldcastle Precast, Inc. (Industry Member)	X	X	X	X	■	■	X	■	X		
Craig Hennings	Southwest Concrete Pavement Association (Industry Member)	X	X	■	X	■	X	X	X	■		
Bob Durham	Durham Stabilization, Inc. (Industry Member)	X ⁴	■	X ⁴	X ⁴	X ⁴	■	■	■	■		
Don Vivant	Sully-Miller Contracting Company (Industry Member)	X	X	X	■	■	X	X	X	X		
Jim Ryan	Paramount Petroleum (Industry Member)	X	X	X	X	■	X	X	X	X		
Jack Van Kirk	Basics Resources, Inc. (Industry Member)	X	X	X	X	X	X	X	X	X		
Jim St. Martin	California Asphalt Pavement Association (Industry Member)	X	X	X	X	X	X	X	X	X		
Robert P. Humer	Asphalt Institute (Industry Member)	X	X	X	■	■	X	X	■	X		
Russell Snyder	California Asphalt Pavement Assoc (Industry Member)	X	X	■	X	X	X	X	X	X		
Tom Tietz	California & Nevada Cement Assoc (Industry Member)	X	■	X	X	X	X	X ⁶		■		
Scott Dmytrow	Telfer Oil (Industry Member)	X	X	X	X	X	X	X	X	■		

¹Scott Jarvis

⁵Cathrina Barros for Joe Peterson

²Agustin Rosales

⁶Jeff Wykoff for Tom Tietz

³Amy Fong for Bill Farnbach

⁴Sara Alzate

January 22, 2014 Meeting Minutes and Action Items

Handouts:

1. October 2013 RPC Meeting Action Items Status Summary
2. January 2014 RPC Management Status Report
http://www.dot.ca.gov/hq/maint/Pavement/RPC/RPC_Workplan.html
3. December 10, 2013 Task Groups Meetings with RPC Co-chairs Meeting Minutes
4. Handouts 3 yr Contract Process and Annual Research Project Approval Process
5. Research Presentation



Rock Products Committee (RPC)

Action Items

From Wednesday, October 30, 2013

1:00 PM to 4:00 PM

TransLab Auditorium, 5900 Folsom Blvd., Sacramento, CA

Action Items Summary

#	MEETING	ITEM	ACTION REQUIRED	WHO	DUE	STATUS
1.	10/30/13	RPC Management Report	Update report 10 days prior to RPC meetings	Chuck Suszko	Whenever required	When Required
2.	10/30/13	Smoothness Report	Link to website for reports	Peter Vacura	11/4/13	10/31/13 Complete
3.	10/30/13	Task Group Meeting with RPC Co-Chairs	Schedule meetings with task groups for December 10, 2013	Phil Stolarski	11/4/13	Complete
4.	10/30/13	Industry Co-Chairs	Caltrans RPC Co-Chairs to discuss joint Industry Chairs	RPC Co-Chairs	11/4/13	Complete



**Rock Products Committee (RPC)
Task Groups Meetings with RPC Co-Chairs
December 10, 2013
1:00 PM to 4:00 PM**

Meeting Minutes Outline of Discussion

Asphalt Task Group

Caltrans TG Co-Chairs

Peter Vacura
Chuck Suszko

Industry Co-Chairs

Jim St. Martin
Jack Van Kirk

RPC Co-Chairs

Phil Stolarski
John Stayton
Agustin Rosales
Amarjeet Benipal
Tony Limas

Meeting Began at 1:00 PM

1. What is the status of approved projects to complete (any resource issue) from FY's 10/12, 11/12 & 12/13 and on going efforts on FY 13/14 for Asphalt Task Group projects?

Jim St. Martin provided the status of the current projects:

Big three: Superpave, RAP/RAS, and Smoothness

- Superpave has some items that will need to be modified during implementation and we will need to continue the effort as new project
- RAP/RAS will have some ongoing effort in 2014 and will not meet the deadline of May 2014. Effort going forward will be monitoring projects.
- Smoothness is almost completed the majority of the effort will be towards improving the specification.
- PGAR will continue into FY14/15
- ARB QC should be completed by June 2014
- Intelligent Compaction is on going with phase 1 development of the NSSP specification completed. The next effort will be monitoring the pilot projects that use the NSSP.
- Long Life Pavement will move on into FY14/15

Amarjeet Benipal: What is needed for long life pavement?

Jim St. Martin: Need to continue monitoring the projects that have been constructed to evaluate performance.

Peter Vacura: Need to work on up front mix design requirements.

Phil Stolarski: What about Quieter Pavement?

Peter Vacura: Need to regroup on this effort to determine progress and what needs to be done to complete this.

Phil Stolarski: What about Aggregate Breakdown?

Jim St. Martin: This project is being addressed by Superpave.

**Task Groups Meetings with RPC Co-Chairs
December 10, 2013
Meeting Minutes Outline of Discussion Continued**

Asphalt Task Group Continued

2. What are the 3 proposed new projects for fiscal year 14/15?

QC/QA for HMA Superpave

Do they require DRI support?

Jim St. Martin: There may need to be some support from UCPRC based on the past work they have done on QC/QA.

3. What is the priority in order to address emerging issues?

Jim St Martin: We understand that as moving forward there will be some emerging issue that surface from Superpave, RAP/RAS and Smoothness.

Other Questions and Comments:

Timeline of getting Scoping Documents ready by March 2014 and follow up meeting of Task group Co-Chairs with RPC Co-Chairs in April 2014. RPC scoping documents should be approved in the May-June timeframe.

Meeting ended at 1:25 PM.

Concrete Task Group

Caltrans TG Co-Chairs

Dan Speer
Amy Fong
Chuck Suszko

Industry Co-Chairs

Ron Stickel
Craig Hennings

RPC Co-Chairs

Phil Stolarski
John Stayton
Agustin Rosales
Amatjeet Benipal
Tony Limas

Meeting began at 1:45 PM

1. What is the status of approved projects to complete (any resource issue) from FY's 10/12, 11/12 & 12/13 and on going efforts on FY 13/14 for Concrete Task Group projects?

Dan Speer provided the project status for the 4 current projects:

- Aggregate Database is completed
- QC/QA for Structure Concrete will continue into FY14/15
- Precast Pavement will be decided on Thursday if it can be complete by June or end of Calendar year
- Recycled Concrete Materials - Key issue will be Concrete Plant CT 109 certification by Chuck's group.

2. What are the 3 proposed new projects for fiscal year 14/15?

Dan Speer:

- Update Shotcrete specification
- Look into flexural testing requirements for Section 40 Concrete Pavement

**Task Groups Meetings with RPC Co-Chairs
December 10, 2013
Meeting Minutes Outline of Discussion Continued**

Concrete Task Group Continued

2. What are the 3 proposed new projects for fiscal year 14/15? Continued

Craig Hennings: There are newer ASTM and AASHTO tests for flexural testing

Dan Speer: Concrete beam testing is more of an industry issue. Update to shotcrete specification is supported by both Caltrans and Industry.

Do they require DRI support?

Dan Speer: No research needed.

3. What is the priority in order to address emerging issues?

Dan Speer: We have not determined priority

Craig Hennings: I think flexural test is more important.

Other Questions and Comments

Timeline for getting Scoping Documents ready is by March 2014 and follow up meeting of Task group Co-Chairs with RPC Co-Chairs in April 2014. RPC scoping documents should be approved in the May-June timeframe.

Craig Hennings: There are several scoping documents that were submitted last year that were not approved by Caltrans such as Dowel Bar and Tie Bar Tolerance. What is the status of the scoping document? Should there be a requirement to document why the scoping document was not approved?

Dan Speer: This was discussed at the Task Group Meeting and you should take your request there.

Meeting ended at 2:40 PM.

Pavement Foundation Task Group

Caltrans TG Co-Chairs

Dan Speer

Amy Fong

Chuck Suszko

Industry Co-Chairs

Don Vivant

RPC Co-Chairs

Phil Stolarski

Amarjeet Benipal

Agustin Rosales

Tony Limas

Meeting began at 2:30 PM

1. What is the status of approved projects to complete (any resource issue) from FY's 10/12, 11/12 & 12/13 and on going efforts on FY 13/14 for Pavement Foundation Task Group projects?

Amy Fong provided the project status for 2 current projects:

- Compensation Adjustment for Ordered Increase in Additives for Stabilized Soils.
Outstanding issue is to complete construction manual revision.

Phil Stolarski: Has an exception been requested to post the specification?

Amy Fong: A request will not be made for special posting of the specification. Districts are using an NSSP for implementation now.

**Task Groups Meetings with RPC Co-Chairs
Meeting Minutes Outline of Discussion Continued**

Pavement Foundation Task Group Continued

1. **What is the status of approved projects to complete (any resource issue) from FY's 10/12, 11/12 & 12/13 for Pavement Foundation Task Group projects?**

Chuck Suszko updated status of Intelligent Compaction:

- Intelligent Compaction moving forward parallel with HMA Intelligent Compaction Effort.

2. **What are the 3 proposed new projects for fiscal year 14/15?**

Chuck Suszko: There is one proposed project to specify quality control and acceptance requirement for all Standard Specifications related to pavement bases and subbases.

Do they require DRI support?

Amy Fong: No research needed.

3. **What is the priority in order to address emerging issues?**

Amy Fong: QC is priority.

Other Questions and Comments

Timeline for getting Scoping Documents ready is by March 2014 and follow up meeting of Task group Co-Chairs with RPC Co-Chairs in April 2014. RPC scoping documents should be approved in the May-June timeframe.

Chuck Suszko: The proposed new project will require a lot of effort because we will be updating all of the Division IV Subbases and Bases specifications.

Amarjeet Benipal: Will this be phased?

Chuck Suszko: The scoping document will have phases for the different sections but should proceed rapidly because some sections are similar and others have already been updated to include quality control requirements such as Sections 28 Concrete Bases and Section 30 Reclaimed Pavements.

Phil Stolarski: Don any comments.

Don Vivant: None.

Meeting ended at 2:44PM.

**Task Groups Meetings with RPC Co-Chairs
December 10, 2013
Meeting Minutes Outline of Discussion Continued**

Pavement Preservation Task Group

Caltrans TG Co-Chairs

Amy Fong
Chuck Suszko

Industry Co-Chairs

Jim Ryan
Scott Dmytrow
Craig Hennings

RPC Co-Chairs

Phil Stolarskil
Agustin Rosales
Amarjeet Benipal
Tony Limas

Meeting began at 3:15PM

1. What is the status of approved projects to complete (any resource issue) from FY's 10/12, 11/12 & 12/13 and on going efforts on FY 13/14 for Pavement Preservation Task Group projects?

Scott Dmytrow presented the status of the PPTG projects:

- Cold In-Place Recycling is on hold because of Caltrans decision on how to move forward.
- Fog Seal: Frozen based on Caltrans needing to complete evaluation by Chico
- Rubberized; Slurry Seal: Performance rubber slurry specification has been sent out to Industry and Caltrans for comments.

Chuck Suszko: Status of Modified Binder is that the standard specification was on hold while the bicycle issues were resolved on Route 1. That issue has been resolved but there is now an effort to have Caltrans remove the Section 92 Revised Standard Specification for PG Modified Asphalt Binders specification and revert back to PG Polymer Modified Binder specification.

Chuck Suszko: Status of WMA Seal Coats is that there are currently two pilot projects in District 2. One project has been completed and evaluation has started and the other project was suspended due to weather.

Amy Fong: Project 14 "Quieter Concrete Pavement should finalize report by the end of the year

Amarjeet Benipal : Is there existing guidance on using new generation grind?

Amy Fong: May need to update the guidance.

Phil Stolarski: Will this project be completed on schedule?

Amy Fong: May be a delay past December 2013.

Amy Fong : Project 16 "Sealer/hardener" is continuing

Amarjeet Benipal: Have pilot projects been completed?

Amy Fong: Pilot projects have not been completed.

Amy Fong: Concrete spall repair will continue.

Chuck Suszko: There is another project that has been added for CRCP punch out repair.

2. What are the 3 proposed new projects for fiscal year 14/15?

Jim Ryan There are two potential projects:

- Certification of Warm Mix Technologies for Seal Coats
- Fog Seal on Dense Grades

**Task Groups Meetings with RPC Co-Chairs
December 10, 2013
Meeting Minutes Outline of Discussion Continued**

Pavement Preservation Task Group Continued

2. What are the 3 proposed new projects for fiscal year 14/15? Continued

Scott Dmytrow: There are some Section 37 issues that need to be addressed from Industry.

Craig Hennings: There will be one new project from concrete side for individual slab replacement using rapid strength concrete and identify best practices and performance factors.

Do they require DRI support?

Individual slab replacement using rapid strength concrete may require DRI support.

3. What is the priority in order to address emerging issues?

Amarjeet Benipal: Need a priority for PPTG projects from Industry including proposed Section 37 issues.

Other Questions and Comments

Scott Dmytrow: Caltrans needs to reconsider not meeting with Industry on December 17, 2013. There are several items that are close to being completed as NSSPs that could be completed on the 17th.

Amarjeet: Anything else Scott and Jim.

Jim Ryan: No

Scott Dmytrow : No

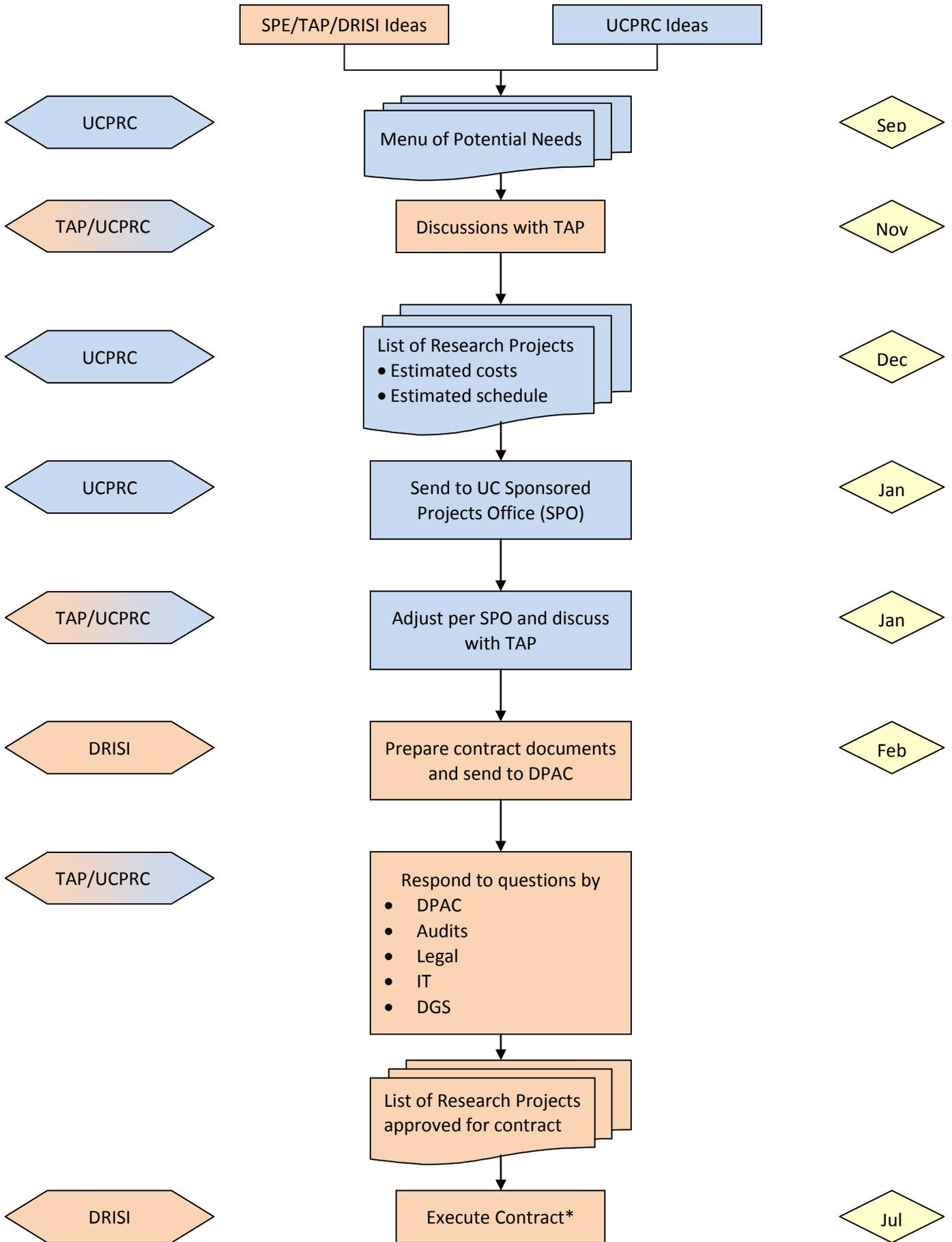
Phil Stolarski: Timeline for getting Scoping Documents ready is by March 2014 and follow up meeting of Task group Co-Chairs with RPC Co-Chairs in April 2014. RPC scoping documents should be approved in the May-June timeframe.

Meeting ended at 3:55PM.

Process to Complete Approval of Projects for FY 14/15 RPC Work Plan:

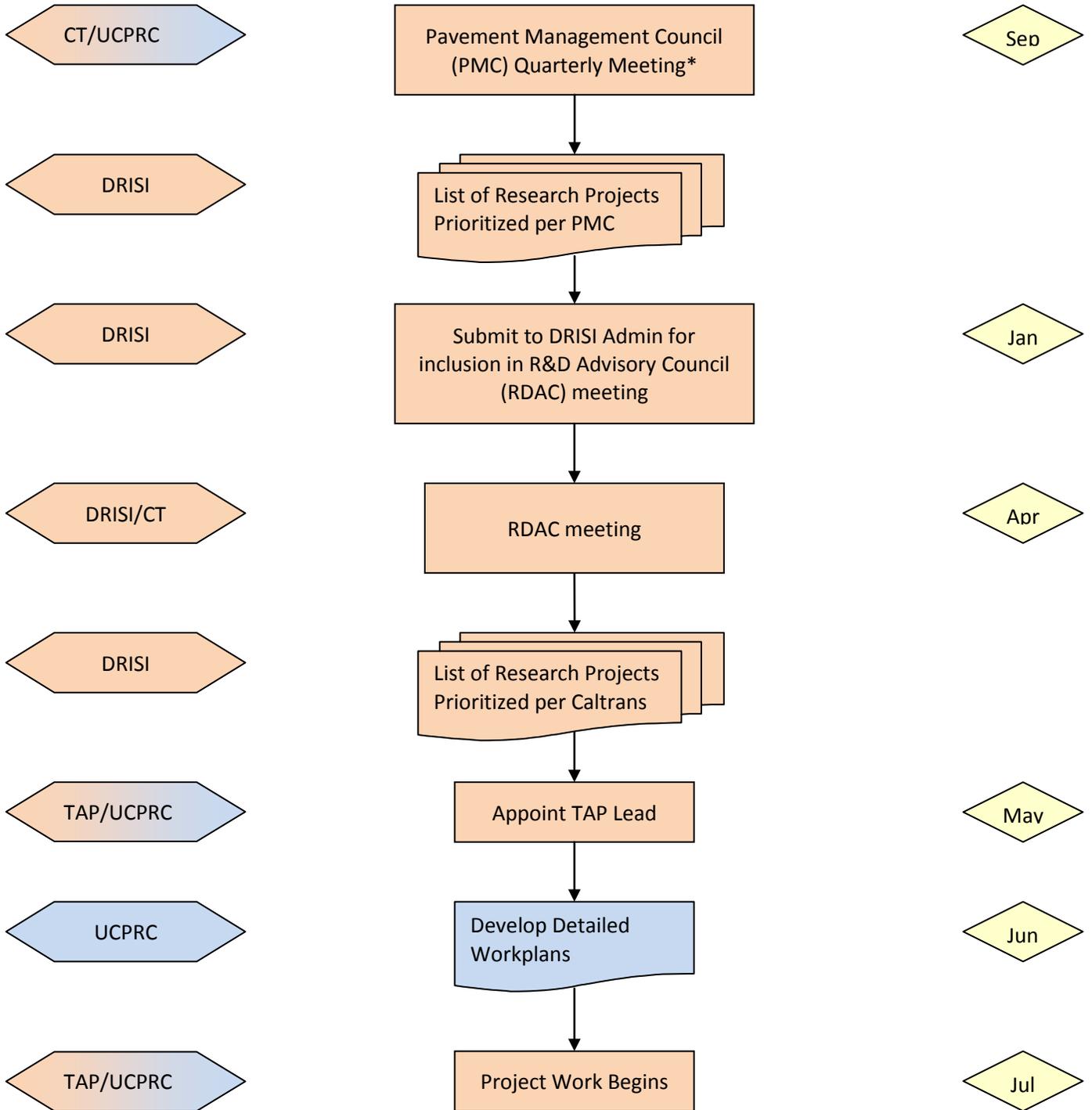
- Task Groups need to meet to finalize selection of 3 proposed projects in January 2014.
- Research support for the proposed projects needs to be identified by the end of January 2014.
- Task Groups need to complete development of scoping documents for the 3 proposed projects during February for submittal to RPC Co-Chairs by end of March 2014.
- Task Groups to identify prioritization of projects to address any emerging issues during FY 14/15.
- Approval of scoping documents should be in June based on the May revised of the State budget.
- Any proposed projects beyond three should be placed on the bin list.

3 yr Contract Process



* No projects are approved at this point

Annual Research Project Approval Process



Caltrans/UCPRC Pavement Research and Implementation

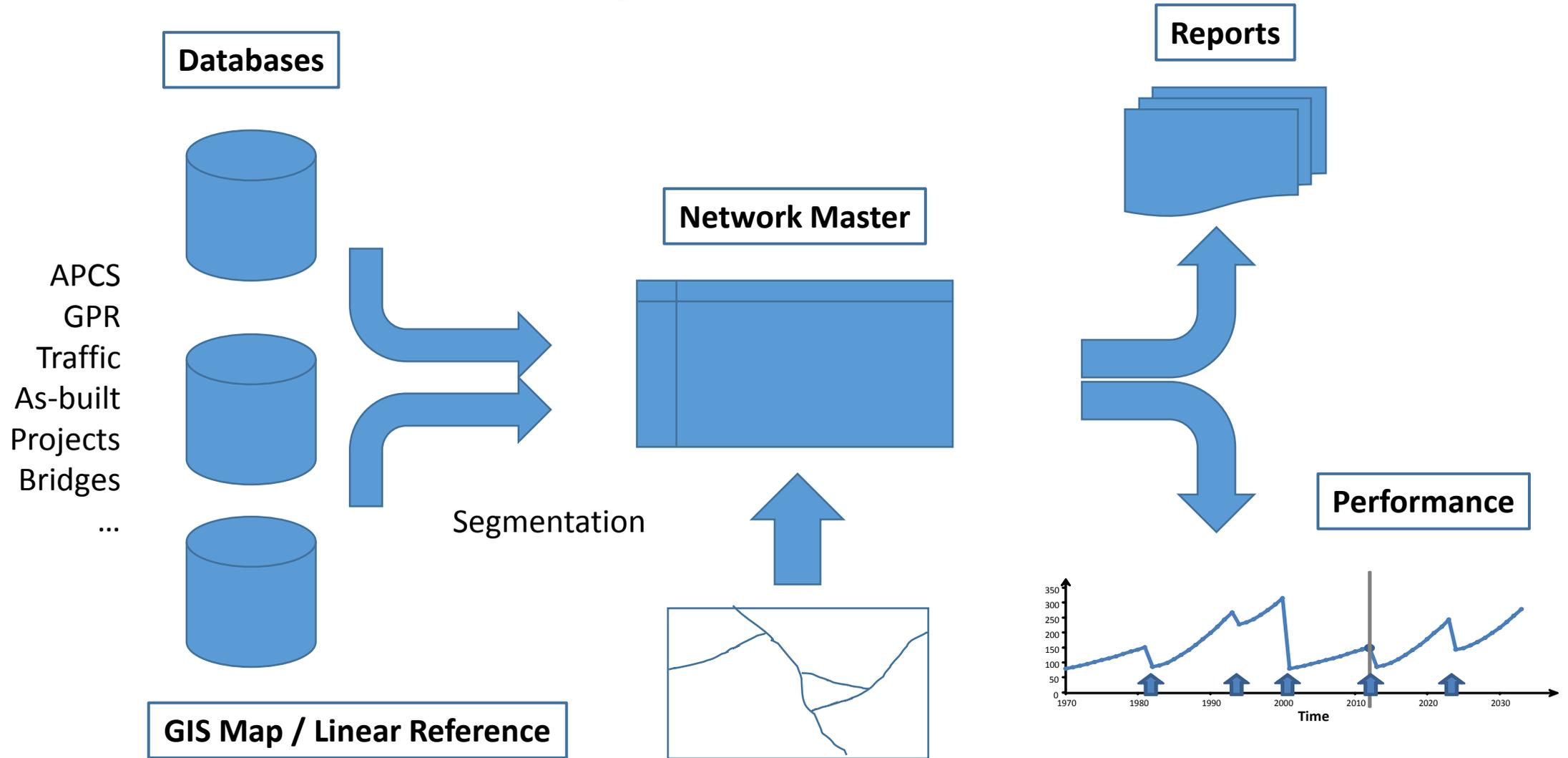
22 January, 2014

Rock Products Committee Meeting

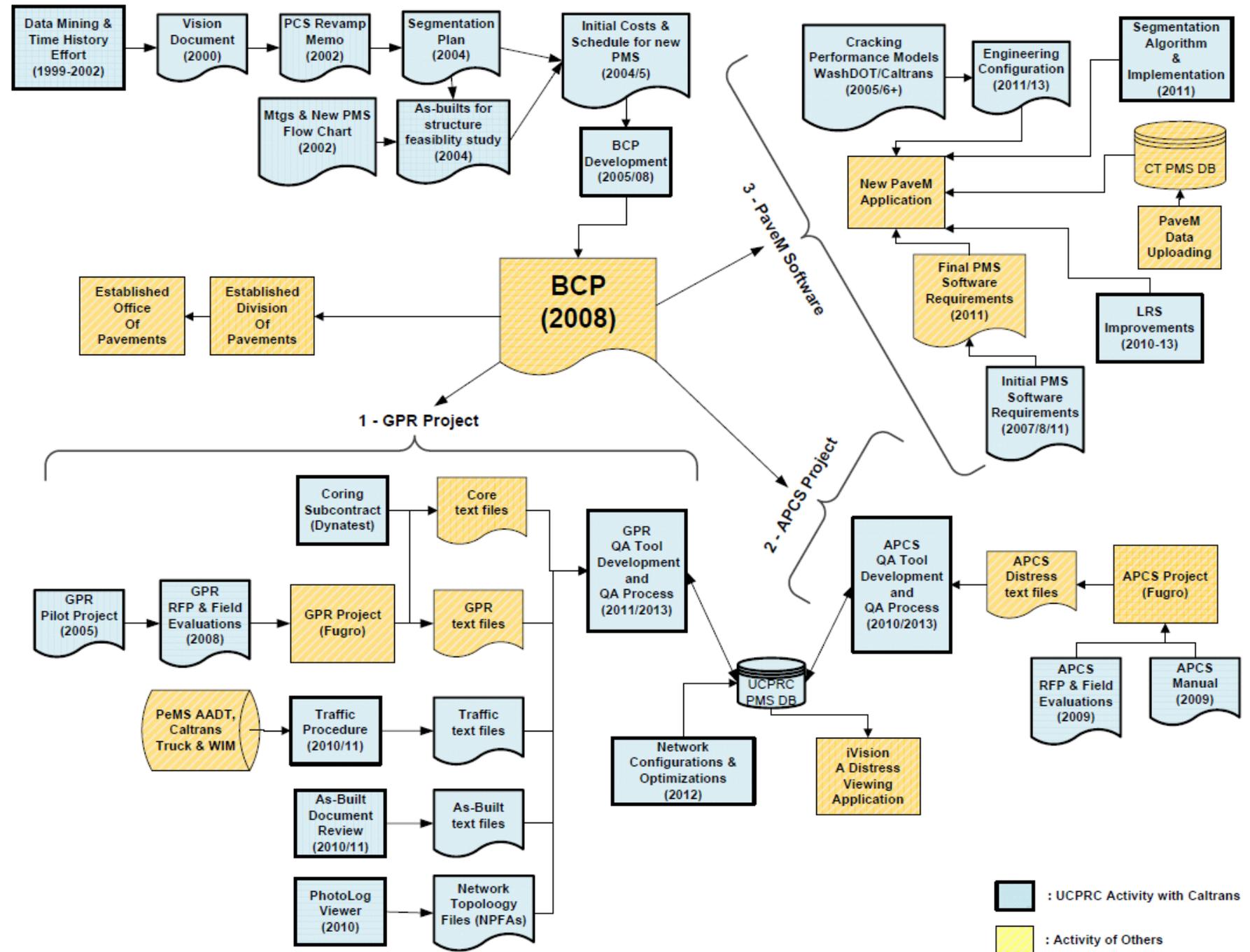
Outline

- Current Research
 - PMS
 - Mechanistic pavement design; Performance based specifications
 - Full-Depth Reclamation
 - Life-Cycle Analysis of Pavements
 - Construction smoothness specification and quality assurance processes
- List of other projects
- Discussion

Pavement Management



UCPRC role in Pavem



Automated Pavement Condition Survey

- First highly automated lane level survey for a full state
- Every mainline lane mile
 - Every slab
 - Data every 30ft
- 50TB of images
 - Allows engineers to “walk the pavement” without leaving the office

APCS & iVision

iVision Home - Mozilla Firefox

File Edit View History Bookmarks Tools Help

ivision.ucprc.ucdavis.edu/ivision/#/Home

Fugro Roadware iVision

Year 2010 Level 10

Linear Reference 0.000

Map

Bing Map Road Aerial Aerial With Labels

Coastal Dr Alker Camp Rd Newton & Drury scenic R

1km 3000ft

ROW

Pavement ROW ForwardLeft

Segments

IDSegment	BeginChainage	EndChainage	STATE	DATE	UNITS	DISTRICT	COUNTY	ROUTE	POSTMILE	DIRECTION	LANE	LATITUDE	LONGITUDE	ELEVATION	LANEODO	FILENAME	DS_BEGIN	DS_
1	0	9.975	06	20110701	SI	01	DN	101	M0.008	NB	01	41.465	-124.037	145.1	5	1710CX00	216199	216
2	9.975	19.975	06	20110701	SI	01	DN	101	M0.024	NB	01	41.465	-124.038	144.7	15	1710CX00	216209	216
3	19.975	29.975	06	20110701	SI	01	DN	101	M0.040	NB	01	41.465	-124.038	144.3	25	1710CX00	216219	216
4	29.975	39.975	06	20110701	SI	01	DN	101	M0.056	NB	01	41.465	-124.038	144	35	1710CX00	216229	216

© 2010 Fugro

Construction History

- UCPRC began loading construction history data
 - Extracted around 900 projects from PDF drawings
- OPM has taken over and nearly completed last project built on network
 - May need to go back and get some major prior projects
 - Need to change some business practices to automate in the future
- First time this data has been captured into single database

Traffic

- Weave together CalTrucks and PEMS data from Traffic Operations
 - CalTrucks has loading
 - PEMS (loop detectors) has volumes
- Determine loading on network using procedures developed by UCPRC for mechanistic design
- Process still requires manual merging of data

PaveM Engineering Configuration

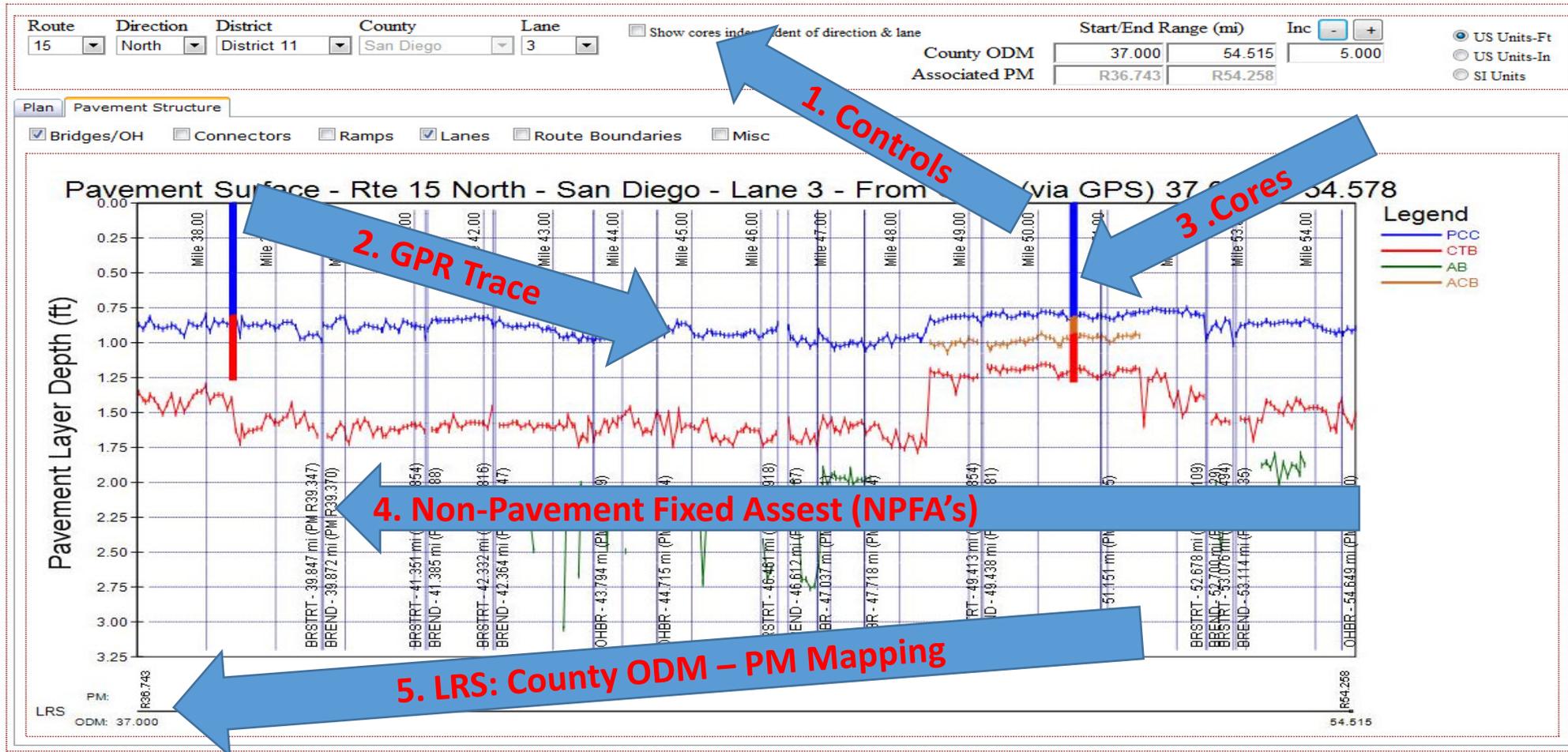
- Treatment list
- Performance variables
- Decision trees
- Performance models
- Benefits equations

iGPR/iGPR-Core

- Viewing tools for Ground Penetrating Radar data and core data
 - Enhanced UCPRC developed GPR QA tool
 - Additional features added to allow CT engineer use for project development
 - First time that core and structure data available in one viewable database
- Presented 5 webinars to Caltrans district engineers in February 2013; approximately 400 attendees
- Approximately 200 cores have been uploaded using iGPR-Core
- Both iGPR and iGPR-Core are web-based applications hosted at UCPRC
- iGPR is also used to create GPR, Core & segmentation files for PaveM

Example

This is the Pavement Structure view in iGPR



PaveM Current Status

- Ground Penetrating Radar (GPR) project is complete
- First Automated Pavement Condition Survey contract is complete
 - Working on second and future surveys
- PaveM is running
 - Rolling out to Caltrans districts
 - Still adapting configuration
 - Beginning to use for project selection
- Continuous improvement

Recent and Current Asphalt ME Projects Using CalME Design Method

- I-710 Long Beach
 - Mix designs (3) developed through performance testing
 - Constructed over multiple years 2003-2007
 - Performing very well under extremely high truck traffic from port of LB
- I-5 Red Bluff
 - Mix designs (3) developed through performance testing
 - Constructed in 2012
- I-5 Weed
 - Mix designs (2) developed through performance testing
 - Constructed in 2012
- I-80 Solano
 - Mix designs (2) developed through performance testing
 - Under construction as of September 2013

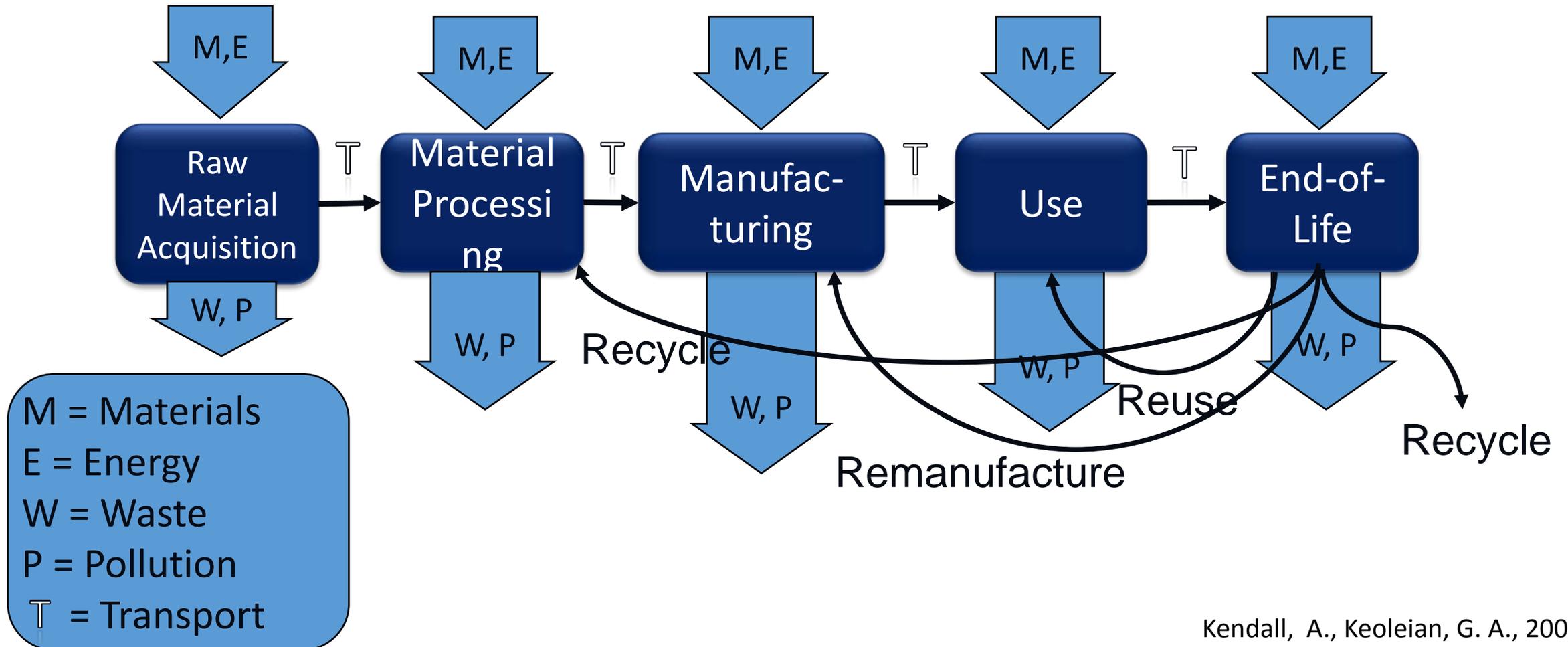
Full-Depth Recycling

- Research
 - Phase 1: FDR-FA
 - Laboratory and field monitoring
 - FDR-FA guidelines
 - Specifications
 - Phase 2: FDR-FA, PC, EE and NS
 - Laboratory and APT
 - Guidelines for FDR
 - Range of performance parameters for ME design
- Implementation
 - Increasing use
 - District dependent

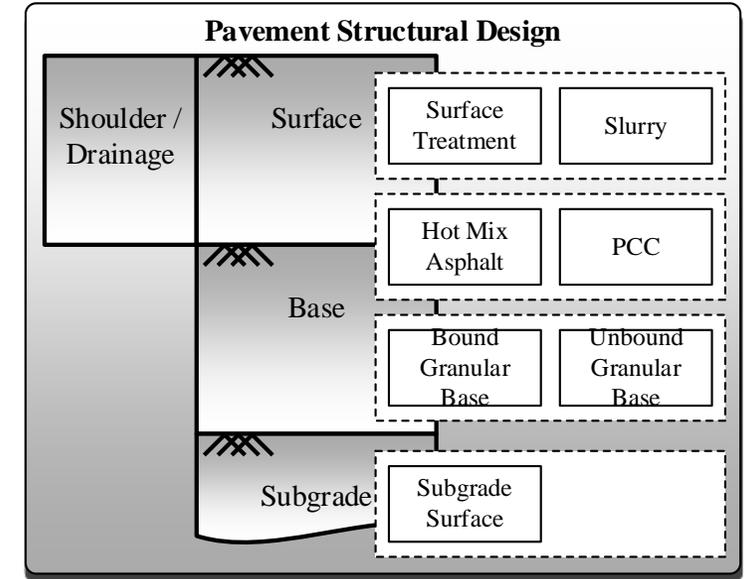
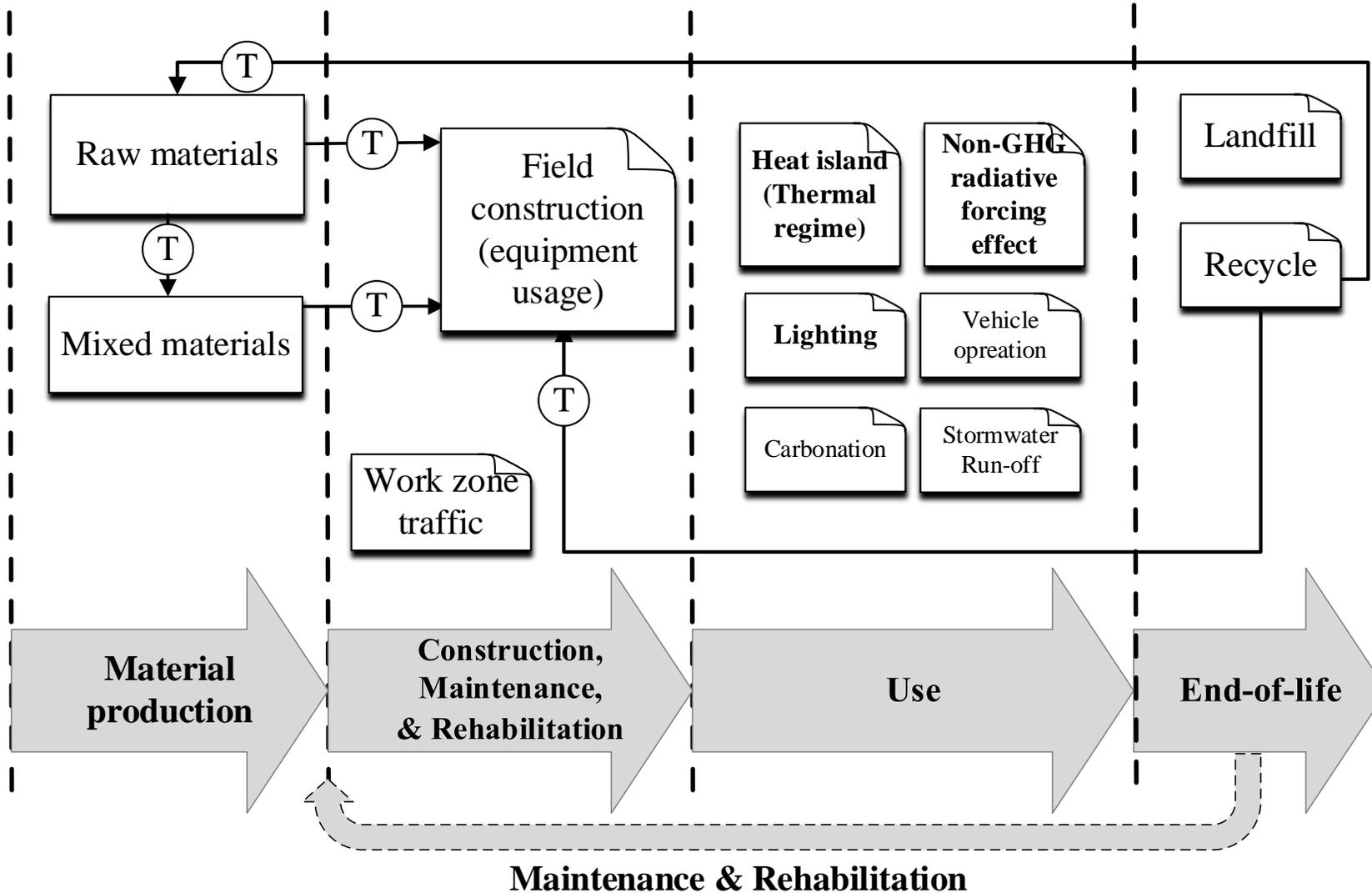


Pavement Environmental Life Cycle Assessment

- Evaluates a product or system throughout its entire *life cycle*



The Pavement Life Cycle



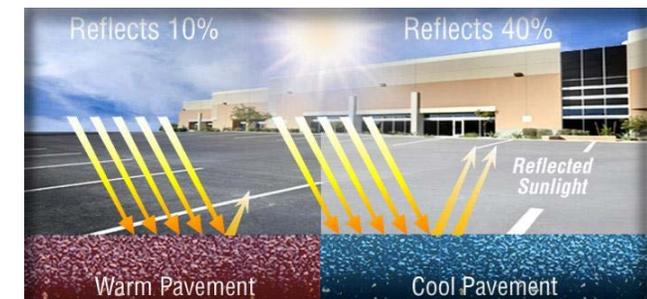
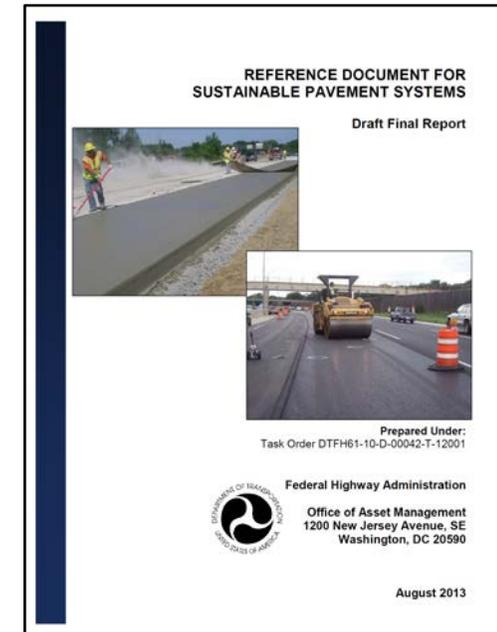
Ⓣ : Transport

▭ : Materials

📄 : Process

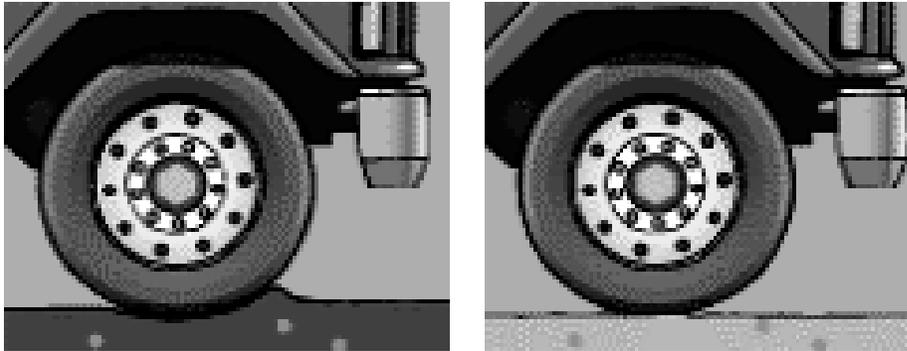
Application of LCA by UCPRC

- Develop LCA model for state highway and local networks
 - Initial models using available data sources
 - Update to a regional databases
- Answer questions regarding GHG emissions in California:
 - Optimal roughness levels (IRI) to trigger M&R
 - Impact of constructed smoothness on the GHG reduction
 - Cost-effectiveness analysis
- FHWA guideline for sustainable pavement systems
- FHWA wide-base tires project
- CARB urban heat island project (AB 296)



On-going projects on LCA

- Pavement deflection and fuel consumption



- Upcoming workshop in 2014
 - Follow up to first International Workshop on Pavement LCA, Davis, CA, 2010
 - www.ucprc.ucdavis.edu/p-lca

Caltrans/UCPRC Inertial Profiler Certification Program

- Starting February 2013, new construction smoothness specifications are implemented on ALL pavement projects
 - SSP 39-1.12 (HMA) and SSP 40-1 (PCC): about 60 in/mi or less for new projects
- Require certified operators and equipment for QA tests
- Two certification sessions conducted:

Time	Certified Equipments	Certified Operators
7/24/2013 and 7/25/2013	5	9
8/27/2013	2	3
Mid-October	Upcoming session	

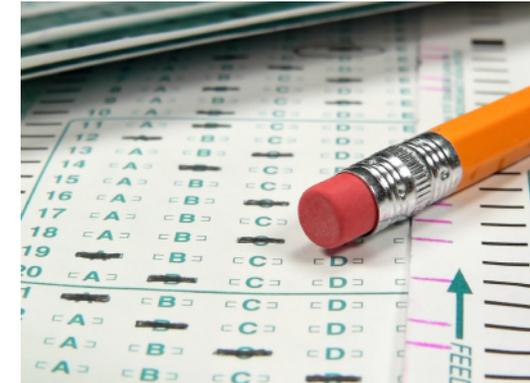
Certification Process



Collecting reference



Classroom training



Operator written test



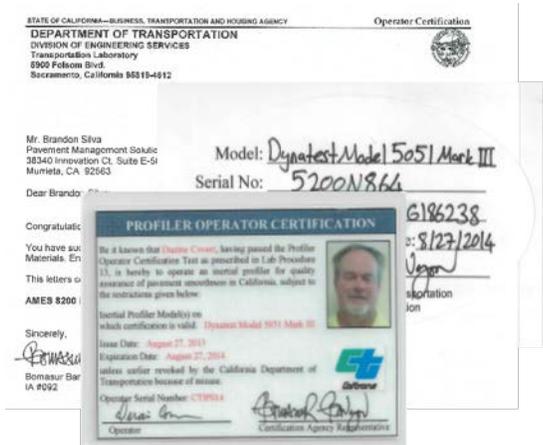
Certification at site



Profiler Certification: Summary Results

Station	Accuracy Left	Accuracy Right	Accuracy Left	Accuracy Right
Station 1	97	75	93	76
Station 2	98	86	98	88
Station 3	96	80	90	82
Station 4	95	78	88	80
Station 5	94	76	87	79
Station 6	93	74	86	77
Station 7	92	72	85	75
Station 8	91	70	84	73
Station 9	90	68	83	71
Station 10	89	66	82	70

Data analysis



Issuing certificates, decals and IDs

Other Caltrans/UCPRC projects

Life Cycle Cost Analysis manual, procedures, training

Quieter pavement research

Superpave asphalt mix design implementation

Design of asphalt rubber materials and structures (AB 338)

Increasing recycled pavement materials content (AB 812)

Concrete materials and early-age cracking

Construction smoothness of overlays

Open graded mix design

Permeable pavement structural and storm water design

Warm mix asphalt

Bay Bridge joint validation

Questions and Discussion