

**Building Better Roads Working Group**  
**General Meeting No. 3**  
**Meeting Minutes**

**LOCATION:** County Operations Center/Kearny Mesa 5520 Overland Avenue, Conference Center Hearing Room, San Diego, CA 92123

**DATE:** February 26, 2019 (9:00 AM)

**TIME:** Start: 9:00 AM – End: 11:00 AM

**ATTENDEES:** See attached sign-in sheets

**AGENDA:**

- Welcome/Opening Statement
- Safety Moment
- Introductions/Sign-in
- Public Comments
- Meeting Norms
- Recap of Working Group's Progress
- Subcommittee Reports
  - Reclaimed Asphalt Pavement (RAP)
  - Alternative Pavements
  - Mix Types
  - Contracting
- Next Steps

**WELCOME/OPENING STATEMENT**

Bill Morgan, County of San Diego – DPW

- Welcomed attendees and thanked everyone for their participation
- County of San Diego – Department of Public Works (DPW) has taken the lead to put together the Building Better Roads Working Group (Working Group)
- San Diego County, including its 18 cities, maintains over 8,000 miles of roads, nearly 2,000 are maintained by the County of San Diego
- This is the third Building Better Roads Working Group meeting; there have been eight subcommittee meetings
- The San Diego region as a whole can benefit from this Working Group and its subcommittees; the intent is to bring together agencies, contractors, and materials suppliers to build relationships and support innovation and sustainability in road construction and maintenance

## **SAFETY MOMENT**

Rich Fitterer, Kleinfelder - DPW Consultant

- Identify locations of building exits, safety meeting area outside, restrooms, and AED

## **INTRODUCTIONS/SIGN-IN**

Rich Fitterer, Kleinfelder - DPW Consultant

- Rich Fitterer introduced himself and his role as the Building Better Roads Facilitator;
- Reminder to sign-in; introductions around the room for all attendees; name and work background

## **PUBLIC COMMENTS IN ACCORDANCE WITH BROWN ACT**

Rich Fitterer, Kleinfelder - DPW Consultant

- The meeting was opened for any interested parties to make a public comment on any item not on the agenda
- No public comments provided

## **MEETING NORMS**

Rich Fitterer, Kleinfelder - DPW Consultant

- Our goal is to make the best use of everyone's time; we have a lot of information to report back to this working group; presentations will be timed; questions are asked to be held until after presentation is complete; if we are running short on time, new agenda items will be noted and tabled for future subcommittee meetings

## **RECAP OF WORKING GROUP'S PROGRESS**

Mark Perrett, County of San Diego – DPW

- Mid-November 2018: First Group meeting held to discuss economic savings, environmental benefits, and innovative strategies for surface treatments; four subcommittees identified as the following: RAP (Reclaimed Asphalt Pavement); Mix Types; Contracting; and Alternative Pavements
- Early December 2018: First round of subcommittee meetings held; each subcommittee identified and discussed in detail topics within their subject
- Mid-December 2018: Second Group meeting held; allowed subcommittees to present their topics to the Group
- Mid-January 2019: Second round of subcommittee meetings held; call to further develop topics into Subcommittee Reports; the reports will be posted on the County's website and are meant to distribute information to be used by the community as a whole; identified industry and agency leads who will be writing the reports
- Late January 2019: Working Group went on a field trip to Vulcan Materials Plant and noted the large amount of recycled material stockpiled
- Today: The four subcommittee leads will give a summary of their group's Subcommittee Reports and efforts; Agency leads will provide more details for each topic and an update on their Subcommittee Report

## **SUBCOMMITTEE REPORTS**

### **RAP**

Keith Kezer, County of San Diego – DPW

- Goal of this subcommittee is to get more RAP into more products and to establish guidance on how to do so; six topics have been identified to further investigate, two of which were moved to Mix Type subcommittee due to overlap in content
1. Use of RAP percentage in Asphalt Concrete Overlays (ACO) in excess of 15% (greater than 15%, less than 25%); Matt Pound, Escondido Materials
    - Summary: County is close to finalizing specifications to increase to 25% for upcoming projects; the jump from 15% to 25% is not significant but there is a need to work on best practices
    - Subcommittee Report: In progress
    - Q&A from Group: increase to 25% will be the County's standard, not just a pilot project; conventional asphalt binders will be used, either 64-10 or 64-16
  2. Use of RAP percentage in ACOs in excess of 25% and its application (lower volume areas); Brandon Milar, CalAPA
    - Summary: Informal survey of the audience: no agencies in San Diego County use greater than 25% RAP; there are sustainability benefits associated with using higher RAP, and benefits given decreasing accessibility to virgin aggregate and asphalt binder; RAP can make asphalt mixes stiffer and therefore more brittle, which can lead to cracking, but mix design standards already exist and have proven successful in other regions; standard specifications already exist for high RAP, but the key for agencies is to show how special provisions should allow that standard specification to be used
    - Subcommittee Report: First draft has been submitted and is under review; the report includes references to existing available specifications and mix design guidance
    - Q&A from Group: a "high percentage" of RAP is typically considered to be 35-50%; additional research is being performed to address how to evaluate mixes with higher RAP to get higher performance; the County is putting out contracts using 25% RAP in asphalt overlays in the near future
  3. Use of RAP in Pavement Seals; Marco A. Estrada, Pavement Recycling Systems
    - Summary: County of Los Angeles uses 100% RAP in their pavement seals; using a pneumatic tire roller greatly improves workability; increased RAP content allows pavement to stay blacker longer, less oxidization; cannot be done with Type 1, only Type 2 and requires segregation
    - Subcommittee Report: First draft has been submitted and is under review; covers history of using RAP in pavement seals and includes related environmental and sustainability benefits
  4. Regulatory environment does not support processing and long-term storage of RAP for reuse; Keith Kezer – County of San Diego DPW
    - Summary: Overview of local agency's policies on long term storage of RAP; materials suppliers can now request a time extension to continue storing RAP; does not increase quantity of RAP allowed to be stored

- Subcommittee Report: First draft has been submitted and is under review; covers CalRecycle's current policies and how to apply for a time extension
- Q&A from Group: Challenges with fabric mixed in with RAP and how to deal with it. Provide as-built information on fabric locations prior to bid if possible; processing plants remove it by hand and place it in a dumpster that is weighed.

### **Alternative Pavements**

Mike Aguilar, County of San Diego – DPW

- Goal of this subcommittee is to explore alternative pavements to utilize in San Diego County; six topics identified to further investigate
1. Use of fiber in HMA; Brandon Milar, CalAPA
    - Summary: Higher RAP percentages can affect tensile strength and lead to premature cracking, fibers can mitigate that risk without increasing asphalt binder or using different blending methods
    - Subcommittee Report: In progress; currently working with agencies, contractors and the fiber industry to put together references to research
  2. Use of Conventional Concrete Pavement; Nate Forrest, CNCA
    - Summary: Benefits to using conventional concrete is it has a high durability with low maintenance, can help urban heat island affects to reduce temperatures, vehicles can consume less fuel on rigid pavements
    - Subcommittee Report: In progress; will contain specifications, references, project examples, design tools and a range of price applications
  3. Use of Roller Compacted Concrete Pavement; Nate Forrest, CNCA
    - Summary: Is applied similarly to the asphalt paving process; very dry mix with low slump; benefits are low maintenance, reduced deflection, high efficiencies for paving equipment; projects on surface streets in Elk Grove, Roseville, and Santa Fe Springs
    - Subcommittee Report: In progress
  4. Use of Concrete as an Overlay over traditional AC Roads; Nate Forrest, CNCA
    - Summary: No surface preparation required; can use in thicker sections to use existing asphalt as a subbase, or thin sections to cap existing structurally sound asphalt; has been applied in parking lots and on Highway 113 in Woodland
    - Subcommittee Report: First draft has been submitted and is under review; contains references to guidance documents, specifications, design tools, and example plans and projects
    - Q&A from Group: Subcommittee Report will not show pricing information; design thicknesses vary from 2" to 6"
  5. Full Depth Reclamation (FDR) of Existing Road Section; Marco A. Estrada, Pavement Recycling Systems
    - Summary: Can be an option when road can no longer be maintained; consider using FDR in any application where asphalt is being removed; provides sustainability benefits by reusing material; guidelines, standards, and specifications exist; can be performed in up to a depth of 18" below surface; mix designs are developed for rate of reagent to be applied and at what depth to be blended; allows pavement to be opened

- to traffic sooner, and minimizes depth of excavation to allow for ramped-in driveways for residents
  - Subcommittee Report: First draft has been submitted and is under review; contains references to guidance documents, specifications, design tools, and local example projects
6. Cold In-Place Recycling (CIR); Marco A. Estrada, Pavement Recycling Systems
    - Summary: Pavement rehabilitation strategy that requires a sound foundation in a base or subgrade; is a 100% recycling process of asphalt pavement; can be used with a nominal amount of cement; specifications exist for Caltrans, not yet Greenbook
    - Subcommittee Report: First draft has been submitted and is under review; contains references to financial and environmental benefits, and performance and material properties

### **Mix Types**

Sam Tadros, County of San Diego – DPW

- Goal of this subcommittee is to explore asphalt pavement mix types and how to standardize mix types in the region; five topics identified to further investigate, two topics from RAP Subcommittee and one from Contracting Subcommittee have been absorbed into topics in this category
1. Warm Mix Asphalt (WMA), Brandon Milar
    - Summary: 35% of mixes used in the US involve WMA; benefits of lowering the mix temperature at the asphalt plant include reduced fuel consumption and reduced emissions; can be used with high RAP content; ability to haul long distances and use in colder temperatures; available in Caltrans standard specifications as an option to the contractor
    - Subcommittee Report: First draft has been submitted and is under review; contains references to existing mix design guidance and specifications
    - Q&A from Group: UCPRC (UC Davis Pavement Research Center) and Caltrans are actively evaluating WMA and have shown it performs the same if not better than conventional HMA
  2. Evaluate ability to utilize mix types and special provisions for all agencies in SD County; Brandon Milar, CalAPA
    - Summary: Different agencies specify different mixes throughout the region, which leads to inefficiencies at materials plants; asphalt plants are not like a “soda fountain”, plant processes vary when switching from one mix type to another
    - Subcommittee Report: In progress
  3. All local agencies should use Standard Specs developed specifically for local agency needs; Rich Fitterer, Kleinfelder - DPW Consultant
    - Summary: Working on putting together an online survey to assess agency standards in the region regarding specifications, mix types, etc.
    - Subcommittee Report: In progress; will be in the form of an online survey
  4. Evaluate need to require fractionation for RAP mixes; Matt Pound, Escondido Materials

- Summary: Treat RAP similarly to virgin aggregate by stockpiling different gradations and weigh appropriately per a mix design; San Diego County has approximately 20 years of aggregate reserves left in quarries
  - Subcommittee Report: First draft has been submitted and is under review; contains best practices and management of RAP at plants to help facilitate producing high RAP mixes
5. Consider balance testing to establish mix designs that are durable and resistant to rutting, while maintaining elastic properties that help with crack resistance; Brandon Milar, CalAPA
    - Summary: This is a design methodology to create high performance pavement by finding a balance between the material properties of strength and flexibility; will require additional testing, not yet developed in existing standards
    - Subcommittee Report: In progress

### **Contracting**

Orland Mott, Mott Engineering

- Goal of this subcommittee is to identify and address challenges in contracting in the region; six topics have been identified to further investigate, one of which was moved to Mix Type subcommittee due to overlap in content
1. Use of Electronic Bidding System; Art Hernandez, TC Construction
    - Summary: County of San Diego uses paper bid system, City of San Diego uses Planet Bids online system; electronic bidding eliminates bids being rejected due to clerical errors, provides clearer and more concise bid documents, saves time and money
    - Subcommittee Report: First draft has been submitted and is under review; contains information about benefits of electronic bidding systems
  2. Develop Regional Bidding Calendar; Orland Mott, Mott Engineering
    - Summary: Regional survey will include questions regarding agencies' motivation for developing a regional bidding calendar
    - Subcommittee Report: In progress; will be in the form of an online survey
  3. Delayed/Flex Start to Contracts; Art Hernandez, TC Construction
    - Summary: County of San Diego standards allow 15 days for NTP which is not enough time to gather required submittals and prepare for project to start; City of Chula Vista uses dual NTPs, one for administrative and one for construction
    - Subcommittee Report: In progress
  4. Traffic Control Restrictions; Orland Mott, Mott Engineering
    - Summary: Traffic control restrictions can be modified to be more efficient and economical for the contractor, and can be more convenient and safer for the public
    - Subcommittee Report: First draft has been submitted and is under review; contains information about benefits to modifying traffic control restrictions
  5. JOC Contracting Improvements- Reduce Scope; Jeff Richardson (ATP/CCA)
    - Summary: There is a potential for JOC contracting to be successful if scope is greatly reduced
    - Subcommittee Report: In progress

**NEXT STEPS:**

Rich Fitterer, Kleinfelder - DPW Consultant and Mark Perrett, County of San Diego DPW

- Review Subcommittee Reports at subcommittee level; distribute Subcommittee Reports to general group for comments; publish final drafts to the County's website to become a resource for the region
- Mark Perrett will be getting in touch with the subcommittee leads to coordinate next steps on the reports and set up meeting dates and times
- Invites group to contact Rich Fitterer or Mark Perrett if there are additional topics anyone would like to discuss further, or if they are interested in joining a subcommittee group

**MEETING ADJOURNED AT 11:00 A.M.**