Technical Changes to Section 37

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Section 37

- Deals with Seal Coats (Bituminous Seals)
- Completely rewritten for uniformity and consistency between various sections
- Not included in the current printed 2015 Standard Specifications (yellow colored book)
- Was posted as RSS on July 15, 2016
- Currently being used
Section 37 - Organization

- Section 37-1: General – all types of seal coats
- Section 37-2: Chip Seals
- Section 37-3: Slurry Seals and Micro-Surfacings
- Section 37-4: Fog Seals and Flush Coats
- Section 37-5: Parking Area Seals
- Section 37-6: Crack Treatments
Organizational Structure

Each section is organized into the following:

- GENERAL
- MATERIALS
- CONSTRUCTION
- PAYMENT
Organizational Structure - Details

- GENERAL
  - Summary
  - Definitions
  - Submittals
  - Quality Assurance
    - General
    - Quality Control
    - Department Acceptance

- MATERIALS
  - General
  - Emulsion/binder
  - Aggregate

- CONSTRUCTION
  - General
  - Equipment
  - Surface Preparation
  - Placement
    - General Requirements
    - Emulsion Application
    - Aggregate Spreading
    - Finishing, Traffic Control, Sweeping
    - Excess aggregate disposal, maintenance

- PAYMENT
  - Measurement & payment
Section 37-2 Chip Seals

- Section 37-2.01: General
- Section 37-2.02: Asphaltic Emulsion Chip Seals
- Section 37-2.03: Polymer Modified Asphaltic Emulsion Chip Seals
- Section 37-2.04: Asphalt Rubber Binder Chip Seals
- Section 37-2.05: Stress Absorbing Member Interlayers
- Section 37-2.06: Modified Asphalt Binder Chip Seals
- Section 37-2.07: Scrub Seals
Section 37-2 Chip Seals

- Section 37-2.01: General
- Section 37-2.02: Asphaltic Emulsion Chip Seals
- Section 37-2.03: Polymer Modified Asphaltic Emulsion Chip Seals
- Section 37-2.04: Asphalt Rubber Binder Chip Seals
- Section 37-2.05: Stress Absorbing Member Interlayers
- Section 37-2.06: Modified Asphalt Binder Chip Seals
- Section 37-2.07: Scrub Seals
PMAE Chip Seal

- We want to place Polymer Modified Asphaltic Emulsion Chip Seal
- Cannot look just at Section 37-2.03: Polymer Modified Asphaltic Emulsion Chip Seals
- Need to look at:
  - Section 37-2.03: Polymer Modified Asphaltic Emulsion Chip Seals
  - Section 37-2.01: General (applicable to all types of Chip Seals)
  - Section 37-1: General (applicable to all types of seal coats)

Nested Pyramid Structure
# PMAE Chip Seal – Nested Pyramid

- **Section 37-2.03 (PMAE Chip Seals)**
  - 37-2.03A General
    - Preconstruction meeting not mentioned
  - 37-2.03B Materials
    - Aggregate gradation
  - 37-2.03C Construction
    - Application rates
  - 37-2.03D Payment
    - Not Used

- **Section 37-2 General (Chip Seals)**
  - 37-2.01A General
    - Preconstruction meeting not mentioned
  - 37-2.01B Materials
    - Aggregate gradation not mentioned
  - 37-2.01C Construction
    - Application rates not mentioned
  - 37-2.01D Payment
    - Details how the items are measured and paid

- **Section 37-1 General (Seal Coats)**
  - 37-1.01 General
    - 37-1.01D(2) Preconstruction Meeting
  - 37-1.02 Materials
    - Aggregate gradation not mentioned
  - 37-1.03 Construction
    - Application rates not mentioned
  - 37-1.04 Payment
    - Not Used
Section 37 Summary

- Section 37 deals with all types of seal coats
- Section 37 was revised for uniformity and consistency between various sections
- RSS was released in July 2016 – not included in the printed 2015 Standard Specifications book
- Need to look at more than just the section for a treatment type

Nested Pyramid Structure
Section 37 Summary

- Section 37 detailed training – jointly conducted by industry and Caltrans for industry, Caltrans and local agencies personnel
  - 2016 – District 2 (Redding) and District 8 (Southern Regional Lab)
  - 2017 – District 6 (Fresno) and District 11 (San Diego) – tentatively third week of March or first week of April
Moving Forward - Subtask Groups

- Section 37 Rewrite - Done
- Surface Seals
  - Section 94 – asphaltic emulsions
  - Rubberized Slurry Seals
  - Modified Binder Chip Seals
  - Fog Seals
- Skid Testing
- CIR – Asphalt Emulsion - ongoing
- CIR – Foamed Asphalt - ongoing
- Thin Concrete Overlay
- Non-destructive Dowell Bar Location
- Concrete Patching & Repair
  - Surface Sealer/Hardener
  - Spall Repair
How to get involved

- Subtask group meetings are open to anyone who is interested in participating

- You can participate in one or all subtask groups based on your available time

- It is a commitment and you should plan on participating in all meetings of a subtask group

- Attend in-person meetings
Thank you!
Review of the major technical changes for Section 37

The PPTG Surface Seal Task Group

2006 vs 2015 Revised Standard Specifications

Realignment and “Plain Language”
Some of the changes we will address today:

- Submittals
- QA Requirements
- Lane Closures – not in Sect 37
- Material submittals
- QC Testing time limits
- Spread rates – CT 339M?
- Field Vialit/Vialit and Sweep Test
- Surface Prep – Place note in Pavement Tech Advisory Guide to remove all Thermo prior to surface treatments
- Added visual acceptance criteria
Submittals

• 10 Days before ALL types of seal coats
  – Names for precon
    • Project Superintendent
    • Project Foreman
    • Traffic Control Foreman
    • No more chip operators, distribu
  – Authorized labs for QC
QC- QA Requirements

• QC labs for agg testing must be in Caltrans IA Program

• Emulsion labs must participate in AASHTO Proficiency Sample Program
Lane Closures

• 15 Min maximum time delay
  – Not in Sect 37 but part of agreement
  – If contractor finds other than this in spec contact Sri Balasubramanian at least 2 weeks prior to bid
Material Submittals and QC Testing Time limits

For submittals
- Cleaned up types of containers used
- Consistency across the board for all seal coats

For QC Testing time limits
- For aggregates tests either 48 or 24 hrs depending on test
- For binders (emulsion, hot applied) submit within 3 days
Spread Rates for Chip Seal Binders

• CT 339M – Once per day per truck
• Hope you listened to Marc Bertsch and Doug Olsen...
Aggregates

• Changed to single table format which now includes:
  – Flat and Elongated
  – Durability
  – In addition

• Vialit Test/Field Vialit/Sweep Test
  – Vialit is in the spec but still in discussion within the group.
Surface Prep and Visual Acceptance

• Note added to Pavement Tech Advisory Guide to remove all thermo plastic prior to surface seal

• For a chip seal, acceptance is based on visual inspection for the following:
  – 1. Uniform surface texture
  – 2. Raveling, which consists of the separation of the aggregate from the asphaltic emulsion or asphalt binder
  – 3. Flushing, which consists of the occurrence of a film of asphaltic material on the surface of the chip seal.
  – 4. Streaking, which consists of alternating longitudinal bands of asphaltic emulsion or asphalt binder without uniform aggregate retention, approximately parallel with the lane line.

• Areas of raveling, flushing or streaking that are greater than 0.5 sq ft shall be considered defective and must be repaired.
• Raveling and streaking must be repaired by placing an additional layer of chip seal over the defective area.
1. Visual inspection for the following:

1.1. Uniform surface texture throughout the work limits.

1.2. Marks in the surface:
   1.2.1. Up to 4 marks in the completed slurry seal or micro-surfacing surface that are up to 1 inch wide and up to 6 inches long per 1000 square feet of slurry seal or micro-surfacing placed.
   1.2.2. No marks in the completed slurry seal or micro-surfacing surface that are over 1 inch wide or 6 inches long.

1.3. Excessive raveling consisting of the separation of the aggregate from the asphaltic emulsion, polymer modified asphaltic emulsion or micro-surfacing emulsion.

1.4. Bleeding consists of the occurrence of a film of asphaltic material on the surface of the slurry seal or micro-surfacing.

1.5. Delaminating of slurry seal or micro-surfacing from the existing pavement.

1.6. Rutting or wash-boarding.
Equipment Calibration and Test Strips

- Tightened up language requiring MPQP – valid for 6 months
- Slurry open to traffic within 4 hrs
- Micro open to traffic within 2 hrs
In Conclusion

- Need to review the new specifications and how to read them
- However, for me personally the biggest learning experience was don’t try to satisfy both and Industry and Caltrans or you end up like this..

Questions??