“STATUS OF HIGHER RAP MIXES INITIATIVE”

PAPA REGIONAL TECHNICAL MEETINGS
March 14, 15 & 16, 2017

PA Asphalt Pavement Association
Gary L Hoffman, P.E.
Director of Technical Services
Higher RAP Mixes

- NCHRP Report 752 (Project 9-46)
- STIC Materials TAG Initiative
- PSU - LTI Task Order #10
- CT S 015-15 Step 1 & 2 Issued
- PAPA had many Questions – Suggestions
- Meeting with PennDOT, FHWA & PAPA
Higher RAP Mixes

CT Step 2, Distributed proposed responses to comments

- Move from % by weight to RBR
- Change back to two Tiers
  - Tier 1 - ≤ 0.20 for 19mm & smaller; ≤ 0.25 for 25mm & larger – Adds graduation SD’s for RAP aggregates
  - Tier 2 > 0.20 for 19mm & smaller; > 0.25 for 25mm & larger – Adds graduation and binder content SD’s for RAP & requires grade determination for RAP binder.
- Adds Method A for RAP – bulk specific gravity for Tier 2
- Solvent extractions for RAP binder
Higher RAP Mixes

Industry responded with items for discussion

✓ Appropriate RBR thresholds/breakpoints between Tiers 1 and 2?
✓ Keep all Tier 1 mix requirements the same as current?
✓ Are graduation SD’s necessary for Tier 2 mixes in light of PWT acceptance criteria on total mix and no such criteria for virgin aggregates?
✓ Why solvent extraction on RAP instead of burn off in oven?
✓ Vetting procedures for establishing Tier 2 stockpiles?
✓ Vetting protocols for establishing SRL of RAP for Tier 2 mixes?
✓ What plant production adjustments can be made in response to RAP stockpile characteristic changes?

Meeting to be scheduled with PennDOT & PAPA in March
RAP Impact on Performance Grade

- **RAP** is Reclaimed Asphalt Pavement
- Asphalt in RAP is aged (oxidized) and typically harder compared to virgin asphalt
- For higher amounts of RAP in mixture (greater than RBR=0.25) agree with the need to verify PG of RAP binder and determine required PG of virgin binder. Should separate RAP & RAS protocols here!
QUESTIONS or SUGGESTIONS!