PAPA Regional Technical Meeting
Cranberry Twp.

March 19, 2019
District 12

Russell B Duda
District 12 Materials Manager 1
(724) 439-7442
rududa@pa.gov
2018 Bituminous Testing

Testing:
• 145 Lots- Mixture Acceptance by box sample
• 119 Lots – Density Acceptance by pavement core

Failure:
• 19 AC failures*
• 53 Gradation failures*
• 5 Density failures
## 2018 Longitudinal Joint Density Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lots Tested</td>
<td>40</td>
<td>41</td>
<td>48</td>
</tr>
<tr>
<td>% Density Range</td>
<td>87.3 – 97.4</td>
<td>90.1 – 98.5</td>
<td>84.4 – 97.2</td>
</tr>
<tr>
<td>% Average Density</td>
<td>93.2%</td>
<td>94.3%</td>
<td>93.3%</td>
</tr>
</tbody>
</table>

### Incentive Lots

- Total $ for Incentive Lots: $176,500
- Delta (Incentive – Disincentive): $167,700

### Disincentive Lots

- Total $ for Disincentive Lots: $184,000
- Delta (Incentive – Disincentive): $175,800

REF: Section 405 Evaluation of Bituminous Pavement Longitudinal Joint Density and Payment of Incentive/Disincentive
2018 Longitudinal Joint Density Performance

• Longitudinal Joint Type
  – Which joint type is being utilized most?
    • Tapered

  – One project used a vertical joint. We suspect we may get better or at least equal density with this method, however leaving the edge in place over night can potentially cause issues and with a 94.1% density average with the tapered joint...if it ain’t broke, don’t fix it.

  – Any longitudinal joint issues?
    No issues are being experienced. Average Joint Density for the last 25 samples is 94.1%

Pennsylvania Department of Transportation
### 2018 Percent Within Tolerance (PWT)

<table>
<thead>
<tr>
<th></th>
<th>PWT SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2016</td>
</tr>
<tr>
<td>Number of PWT Projects</td>
<td>11</td>
</tr>
<tr>
<td>Number HOLA</td>
<td>1</td>
</tr>
<tr>
<td>Number LTS</td>
<td>10</td>
</tr>
</tbody>
</table>

#### Average Pay Factors (%)

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>100.11</td>
<td>100.64</td>
<td>101.02</td>
</tr>
<tr>
<td>PCS</td>
<td>99.46</td>
<td>98.53</td>
<td>97.71</td>
</tr>
<tr>
<td>#200 Screen</td>
<td>103.13</td>
<td>102.43</td>
<td>101.34</td>
</tr>
<tr>
<td>Density</td>
<td>103.50</td>
<td>103.90</td>
<td>103.97</td>
</tr>
</tbody>
</table>

#### Average Density

- 2016: 94.6
- 2017: 95.0
- 2018: 94.7

#### Average Overall Lot Pay Factor (%)

- 2016: 1.02
- 2017: 1.02
- 2018: 1.02

#### Bonus ($)

- 2016: $121,392
- 2017: $209,443
- 2018: $334,119

#### Penalty ($)

- 2016: -$28,014
- 2017: -$43,618
- 2018: -$75,428
2019 Planned Construction Projects

• Projects With > 1000 tons of WMA Paving

  – ECMS#108309, Let Date 2/28/19, SR 21-0, Fayette County, 3,700 Tons
  – ECMS#111235, Let Date 3/14/19, SR 19-SIP, Greene County, 21,000 Tons
  – ECMS#108354, Let Date 3/28/19, SR 819-0, Westmoreland County, 6,900 Tons
  – ECMS#108277, Let Date 3/28/19, SR 980-0, Washington County, 75,000 Tons
  – ECMS#110064, Let Date 3/28/19, SR 31-04R, Westmoreland County, 5,800 Tons
2019 Planned Construction Projects

• Projects With > 1000 tons of WMA Paving

  – ECMS#107346, Let Date 10/4/18, SR 381-OMG, Fayette County, 6,240 Tons
  – ECMS#57201, Let Date 3/28/19, SR 519-K10, Washington County, 30,165 Tons
  – ECMS#70100, Let Date 11/1/18, SR 356-J10, Westmoreland County, 39,335 Tons
  – ECMS#91581, Let Date 5/23/19, SR 70-22R, Washington County, 41,680 Tons
2019 Planned Construction Projects

- Projects With > 1000 tons of WMA Paving

  - ECMS#76073, Let Date 12/13/18, SR 4007-C10, Washington County, 4,313 Tons
  - ECMS#81650, Let Date 11/1/18, SR 8042-01M, Washington County, 1,048 Tons
  - ECMS#106881, Let Date 2/14/19, SR 119-F10, Fayette County, 1,230 Tons
  - ECMS#75996, Let Date 9/13/18, SR 201-J10, Fayette County, 1,185 Tons
  - ECMS#79406, Let Date 10/4/18, SR 711-03M, Westmoreland County, 1,080 Tons
2019 Planned Construction Projects

• Projects With > 1000 tons of WMA Paving

  – ECMS#109780, Let Date 12/13/19, SR 2023-01M, Fayette County, 3,596 Tons
  – ECMS#109781, Let Date 12/13/18, SR 4021-01M, Greene County, 1,164 Tons
  – ECMS#106883, Let Date 12/6/18, SR 3041-A10, Washington County, 1,274 Tons
## 2019 Maintenance WMA Tons (Estimated)

<table>
<thead>
<tr>
<th>County</th>
<th>9.5 mm</th>
<th>12.5 mm</th>
<th>19.0 mm</th>
<th>19.0 mm LVR</th>
<th>25.0 mm</th>
<th>37.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-1</td>
<td>3,000</td>
<td></td>
<td>2,500</td>
<td></td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>12-2</td>
<td>3,000</td>
<td></td>
<td>250</td>
<td></td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>12-4</td>
<td>30,000</td>
<td></td>
<td>5,000</td>
<td></td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>12-5</td>
<td>20,000</td>
<td></td>
<td>5,000</td>
<td></td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>TOTAL TONS</td>
<td>56,000</td>
<td>12,750</td>
<td>2,150</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LVR = Low Volume Roads
• Have you tried a 6.33 mm Thin Lift project yet?
  – We have not done a 6.33 mm project to date. Our DE wants to on SR119 however as of now the funding is not there.

• Do you utilize SMA on all Interstate Highways?
  – We do and believe for interstate work it is a better product. Stone on stone contact, better for rutting, more oil.

• Are you still having tack coat issues? What tack coat type do you predominantly specify? Why?
  - We switched to Non-Tracking Tack (0460-0003). We have had no issues and have been using it for over a year.
• Have your maintenance forces completed a 19.0 mm for Low Volume Roads mix project yet?
  – None to date. We have some scheduled for 2019 but possibly funding issues may halt the projects.

• Have you bid or completed a LLAP Project?
  – No pilot currently in D-12. Primarily focused on bridges.

• Have you bid and/or completed any crack and seat projects/asphalt structural overlay in the past few years?
  – We have not bid any crack and seat projects in D-12.
Please discuss any Innovations/Best Practices that you have piloted or recommend.

- We completed a 100% RAP cold recycling project in Washington County in 2018 (ECMS#31180). Department owned pugmill was brought in. Lane milled from SR70, crushed, screened and stockpiled the material and placed it on a four digit SR (Old Brick Rd).
• Please discuss any changes to policy, specifications, special provisions, staff, etc. that are relevant to the asphalt paving industry.

  – We aligned our RAP SSP with the proposed spec by making the base and binder a .30 before requiring performance testing.
Questions/Comments???

Russell B Duda
D-12 Materials Manager 1
724.439.7442
rududa@pa.gov