Origin

• The Municipal HMA Liaison Committee was established in 2010 as a partnership between Ontario Hot Mix Producers Association (OHMPA) and OGRA in response to requests from municipal staff for a committee to discuss municipal issues surrounding HMA.
Municipal HMA Liaison Committee

Committee Makeup

Associations:

Cities:

Ontario Hot Mix Producers Association

Hamilton

Oshawa
Municipal HMA Liaison Committee

Counties:

- County of Essex
- Middlesex County
- Niagara Region
- County of Peterborough
- York Region
- Region of Waterloo
Municipal HMA Liaison Committee

Industry:

1. Yellowline Asphalt Products Ltd.
2. Ferman Paving Limited
3. Beamish Construction Co., Limited
4. Miller The Miller Group
Committee Mandate

• Facilitate the development of Best Practice Guides.
• Provide/develop educational materials and program.
• Recommend updates to asphalt related Ontario Provincial Standard Specifications (OPSS) and Ontario Provincial Standard Drawings (OPSD).
Quality Assurance Subcommittee
- Payment Adjust Sheet for Borderline Material (OPSS 310).
- Contract Language for MGAC.
- Development of a Best Practice on Segregation.

Draft OPS 310 Hot Mix - Acceptance and Price Adjustment Sheet

<table>
<thead>
<tr>
<th>Number of Sublots</th>
<th>AC</th>
<th>MDD (%)</th>
<th>600 µm</th>
<th>75 µm</th>
<th>RCV (%)</th>
<th>Acceptable Range</th>
<th>VMAC (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.10</td>
<td>82.8</td>
<td>66.6</td>
<td>29.9</td>
<td>5.0</td>
<td>2.84</td>
<td>3.64</td>
</tr>
<tr>
<td>2</td>
<td>5.12</td>
<td>82.4</td>
<td>69.4</td>
<td>30.2</td>
<td>5.0</td>
<td>2.50</td>
<td>3.50</td>
</tr>
<tr>
<td>3</td>
<td>5.12</td>
<td>82.4</td>
<td>69.4</td>
<td>30.2</td>
<td>5.0</td>
<td>2.50</td>
<td>3.50</td>
</tr>
<tr>
<td>4</td>
<td>5.02</td>
<td>82.0</td>
<td>66.9</td>
<td>28.5</td>
<td>4.0</td>
<td>2.70</td>
<td>3.70</td>
</tr>
<tr>
<td>5</td>
<td>5.07</td>
<td>82.0</td>
<td>68.4</td>
<td>26.4</td>
<td>3.0</td>
<td>2.50</td>
<td>3.50</td>
</tr>
<tr>
<td>6</td>
<td>5.34</td>
<td>82.4</td>
<td>68.2</td>
<td>24.4</td>
<td>2.0</td>
<td>2.50</td>
<td>3.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Adjustment Points</th>
<th>Payment Reduction Factor</th>
<th>Total Price Adjustment Points</th>
<th>Payment Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal to 0</td>
<td></td>
<td>5.80</td>
<td>97.1%</td>
</tr>
<tr>
<td>Less than or equal to 20</td>
<td>0.10 (20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater than 20</td>
<td>0.05 (30)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater than 30</td>
<td>Ineligible</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Municipal HMA Liaison Committee

**Contractor Work Subcommittee**
- Development of a Contractor Prequalification Document.
- Development of a Project Evaluation/Performance Sheet.
Municipal HMA Liaison Committee

Education/Innovation Subcommittee
- Development of technical information to help municipalities deal with HMA Quality.
  - Asphalt Plants and Pavers.
  - Asphalt Inspection and Sampling/Testing.
  - Best Practices.
- Creation - Municipal Paver of the Year.
2011 Municipal HMA Survey
• Categories: Design, Material, Construction, and Performance.
• Top three (3) issues identified.
  • Drainage.
  • Longitudinal Joints.
  • Late Season Paving.
2015 Municipal HMA Survey

• Snapshot of the existing condition of asphalt pavement condition in Ontario.
• Results to be used to establish priorities to address municipal concerns.
  • Best practices.
  • Whitepapers.
  • Amendments to OPSS.
2015 Municipal HMA Survey

• Collecting information on:
  • Pavement details.
    • Age, road class, paved shoulders, lift thickness, …
  • Surface coarse mix design details
    • Type, AC grade and content, RAP content, …
  • Pavement distresses.
    • Type and severity based on MTO SP-024.
## 2015 Municipal HMA Survey

- Worksheets provide guidance on individual distresses.
  - Example – Longitudinal Cracking.

<table>
<thead>
<tr>
<th>Description</th>
<th>Crack which follows a course approximately at right angles to the pavement centre line. Full transverse cracks tend to be regularly spaced along the length of the road, while half transverse and part transverse occur at shorter, intermediate distances.</th>
</tr>
</thead>
</table>
| Possible Causes | 1. Natural shrinkage caused by very low temperatures.  
2. High temperature susceptibility of asphalt cement binder in asphalt mixes.  
3. Frost action.  
4. Reflection cracks. |
<table>
<thead>
<tr>
<th>Severity</th>
<th>Class</th>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Slight</td>
<td>Less than 3 mm single crack.</td>
<td></td>
</tr>
<tr>
<td>Slight</td>
<td>Single crack 3 mm to 12 mm.</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>13 mm to 19 mm single crack, or multiple cracks even if crack opening is less than 13 mm. Cracks starting to develop cupping or lipping.</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>20 mm to 25 mm single crack, or multiple cracks even if crack opening is less than 20 mm but greater than 13 mm. Cracks have developed cupping or lipping distortion.</td>
<td></td>
</tr>
<tr>
<td>Very Severe</td>
<td>Greater than 25 mm single crack, or multiple cracks even if crack opening is less than 25 mm but greater than 20 mm. Cracks are distorted with cupping and lipping, and spalling of the cracked edges.</td>
<td></td>
</tr>
</tbody>
</table>
## Municipal HMA Liaison Committee

### 2015 Municipal HMA Survey

- Example.

<table>
<thead>
<tr>
<th>Distresses</th>
<th>Total Projects</th>
<th>Mix Type</th>
<th>Superpave</th>
<th>Mix Desc.</th>
<th>SP 12.5</th>
<th>AC Spec.</th>
<th>OPSS</th>
<th>AC Grade</th>
<th>PG 58-28</th>
<th>AC Content</th>
<th>Rap Content</th>
<th>Cracking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mix 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Transverse</td>
</tr>
<tr>
<td>Constructed 2013 to 2014</td>
<td>2.0</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
</tr>
<tr>
<td>Constructed 2009 to 2012</td>
<td>2.0</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
</tr>
<tr>
<td>Constructed 2000 to 2008</td>
<td>0.0</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
</tr>
<tr>
<td>Constructed pre 2000</td>
<td>0.0</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
<td>Severe</td>
<td>None</td>
<td>Slight</td>
<td>Moderate</td>
</tr>
<tr>
<td>Additional Comments</td>
<td></td>
<td>Only occasional transverse cracking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>For slight, only in a few locations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:

- AC Spec: AC Specificity
- OPSS: Operating Performance Specifications
- AC Grade: AC Grade
- PG 58-28: Performance Grade 58-28
- AC Content: AC Content
- Rap Content: Rap Content
- Cracking: Cracking Severity
Thank you

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