



Ontario Hot Mix Producers Association



*Working for Municipalities*

# OHMPA/OGRA Municipal Hot Mix Asphalt Liaison Committee

OHMPA Partners in Quality Workshops  
May 3, 2016

# Municipal HMA Liaison Committee

## 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:



Ontario Hot Mix Producers Association

Cities:



# Municipal HMA Liaison Committee

Counties:




# Municipal HMA Liaison Committee

Industry:



# Municipal HMA Liaison Committee

## 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).
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# Municipal HMA Liaison Committee

## 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									
	Number of Sublots	5	AC	DLS (1)	4.75 mm	600 µm	75 µm	Air Voids (2) Acceptable Range	VMA (3)
A	Sample Location	JMF	5.00	80.2	54.6	25.3	3.3	3.00 5.00	14.00
	Sublot	1	5.10	82.9	60.6	29.9	3.0	2.80	13.80
		2	4.90	81.4	56.5	24.8	3.0	2.20	12.80
		3	5.12	84.3	61.0	30.2	3.0	2.50	13.30
		4	5.02	80.0	56.9	26.5	2.8	2.70	13.10
		5	5.07	83.2	58.4	26.4	2.7	2.50	13.20
		6							
B	Lot Mean		5.04	82.36	58.68	27.56	2.90	2.54	13.24
C	Departure from JMF (A-B)		0.04	2.2	4.1	2.3	0.4	0.46	0.76
D	Allowable Mean Tolerance (AMT)		0.27	4.50	4.50	3.10	1.80	0.30	0.50
E	Percent outside AMT (C-D)		0.00	0.00	0.00	0.00	0.00	0.16	0.26
F	Lot Maximum		5.12	84.3	61.0	30.2	3.0	2.80	13.80
G	Lot Minimum		4.90	80.0	56.5	24.8	2.7	2.20	12.80
H	Lot Range (F-G)		0.22	4.3	4.5	5.4	0.3	0.60	1.00
I	Allowable Lot Range (ALR)		0.60	10.0	10.0	7.0	4.0	2.00	2.00
J	Percent outside ALR		0.00	0.0	0.0	0.0	0.0	0.00	0.00
K	Mean Adjustment Points		0.00	0.0	0.0	0.0	0.0	3.20	2.60
L	Range Adjustment point		0.00	0.00	0.00	0.00	0.0	0.00	0.00
M	Sub-Total Adjustment Points (K+L)		0.00	0.00	0.00	0.00	0.00	3.20	2.60
Total Adjustment Points			Payment Reduction Factor		Total Price Adjustment Points		Payment Factor		
Equal to 0			Nil						
Less than or equal to 20			P *0.005		5.80		97.1%		
Greater than 20			(0.03*P) - 0.5				97.1%		
Greater than 30			Rejectable						

Draft Contract Language for  
MATERIAL SPECIFICATION FOR MSCR GRADED ASPHALT CEMENT  
Intended to replace OPSS/MUNI 1101 dated November 2013

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**APPENDICES**

1101-A COMMENTARY

**1101.01 Scope**  
This specification covers the requirements for the properties and use of MSCR (Multiple Stress Creep Recovery) graded asphalt cements. It is intended to replace OPSS/MUNI 1101 dated November 2013.

**1101.01.01 Specifications Significance and Use**  
This specification is written as a municipal-oriented specification. Municipal-oriented specifications are developed to reflect the administration, testing, and payment policies, procedures, and practices of many municipalities in Ontario.  
Use of this specification or any other specification shall be according to the Contract Documents.

**1101.01.02 Appendices Significance and Use**  
Appendices are not for use in provincial contracts as they are developed for municipal use, and then, only when invoked by the Owner.  
Appendices are developed for the Owner's use only.  
Inclusion of an appendix as part of the Contract Documents is solely at the discretion of the Owner.  
Appendices are not a mandatory part of this specification and only become part of the Contract Documents as the Owner invokes them.  
Invoking a particular appendix does not obligate an Owner to use all available appendices. Only invoked appendices apply.

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November 2014

# Municipal HMA Liaison Committee

## Contractor Work Subcommittee

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

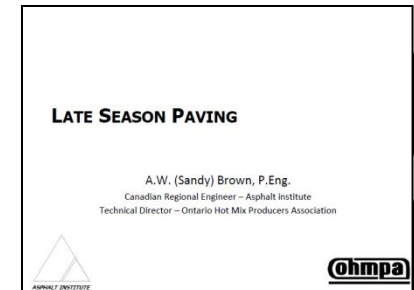
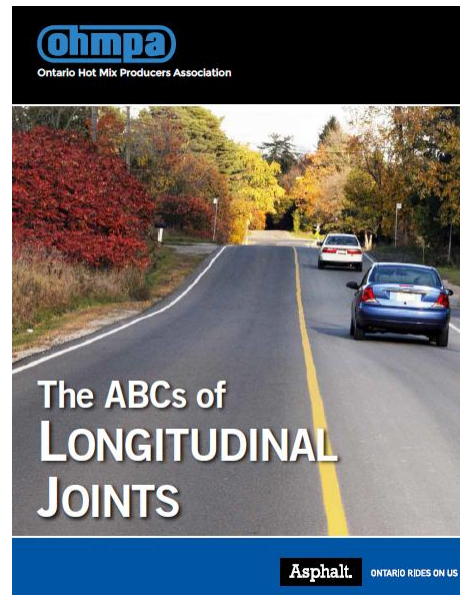
## Education/Innovation Subcommittee

- 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.

# Municipal HMA Liaison Committee

## 2011 Municipal HMA Survey

- Categories: Design, Material, Construction, and Performance.
- Top three (3) issues identified.
  - Drainage.
  - Longitudinal Joints.
  - Late Season Paving.



# Municipal HMA Liaison Committee

## 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.

# Municipal HMA Liaison Committee

## 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.

# Municipal HMA Liaison Committee

## 2015 Municipal HMA Survey

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

**Description:** 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.

**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.

Severity:	Class	Guidelines
	Very Slight	Less than 3 mm single crack.
	Slight	Single crack 3 mm to 12 mm.
	Moderate	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.
	Severe	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.
	Very Severe	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.



Moderate (Multiple) Transverse Crack



Severe Transverse Crack with Spalling

# Municipal HMA Liaison Committee

## 2015 Municipal HMA Survey

- Example.

<b><u>Mix 1</u></b>		Mix Type	Superpav e	Mix Desc.	SP 12.5	AC Spec.	OPSS	AC Grade	PG 58-28	AC Content	5.0%	Rap Content	0.0%
Distresses	Total Projects	Cracking											
		Transverse				Longitudinal Wheel Track				Longitudinal Mid-Lane			
Constructed 2013 to 2014	2.0	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe
		2.0				2.0				2.0			
Constructed 2009 to 2012	2.0	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe
		1.0	1.0			2.0				1.0	1.0		
Constructed 2000 to 2008	0.0	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe
Constructed pre 2000	0.0	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe	None	Slight	Moderate	Severe
Additional Comments		Only occasional transverse cracking								For slight, only in a few locations			



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# 2016 Municipal Paving Forecasts and Issues/Concerns

OHMPA Partners in Quality Workshops  
May 3, 2016

# 2016 Local Municipal Forecast

## Municipality of Chatham-Kent



59,000 tonnes





# 2016 Local Municipal Forecast

## Dufferin County



40,800 tonnes

# 2016 Local Municipal Forecast

## Elgin County



HMA 26,500 tonnes

CIP 110,000 m<sup>2</sup>

# 2016 Local Municipal Forecast

## Essex County



HMA 32,000 tonnes

CIP 137,000 m<sup>2</sup>

# 2016 Local Municipal Forecast

## Huron County



HMA 25,500 tonnes

CIP 198,000 m<sup>2</sup>

# 2016 Local Municipal Forecast

## Lambton County



HMA 40,800 tonnes

CIP 160,000 m<sup>2</sup>

# 2016 Local Municipal Forecast

## City of London



HMA 20,000 tonnes



# 2016 Local Municipal Forecast

## Niagara Region



HMA 50,000 tonnes



# 2016 Local Municipal Forecast

## Oxford County



HMA 18,400 tonnes

Bonded Wearing Course 82,600 m<sup>2</sup>

CIP 133,170 m<sup>2</sup>



# 2016 Local Municipal Forecast

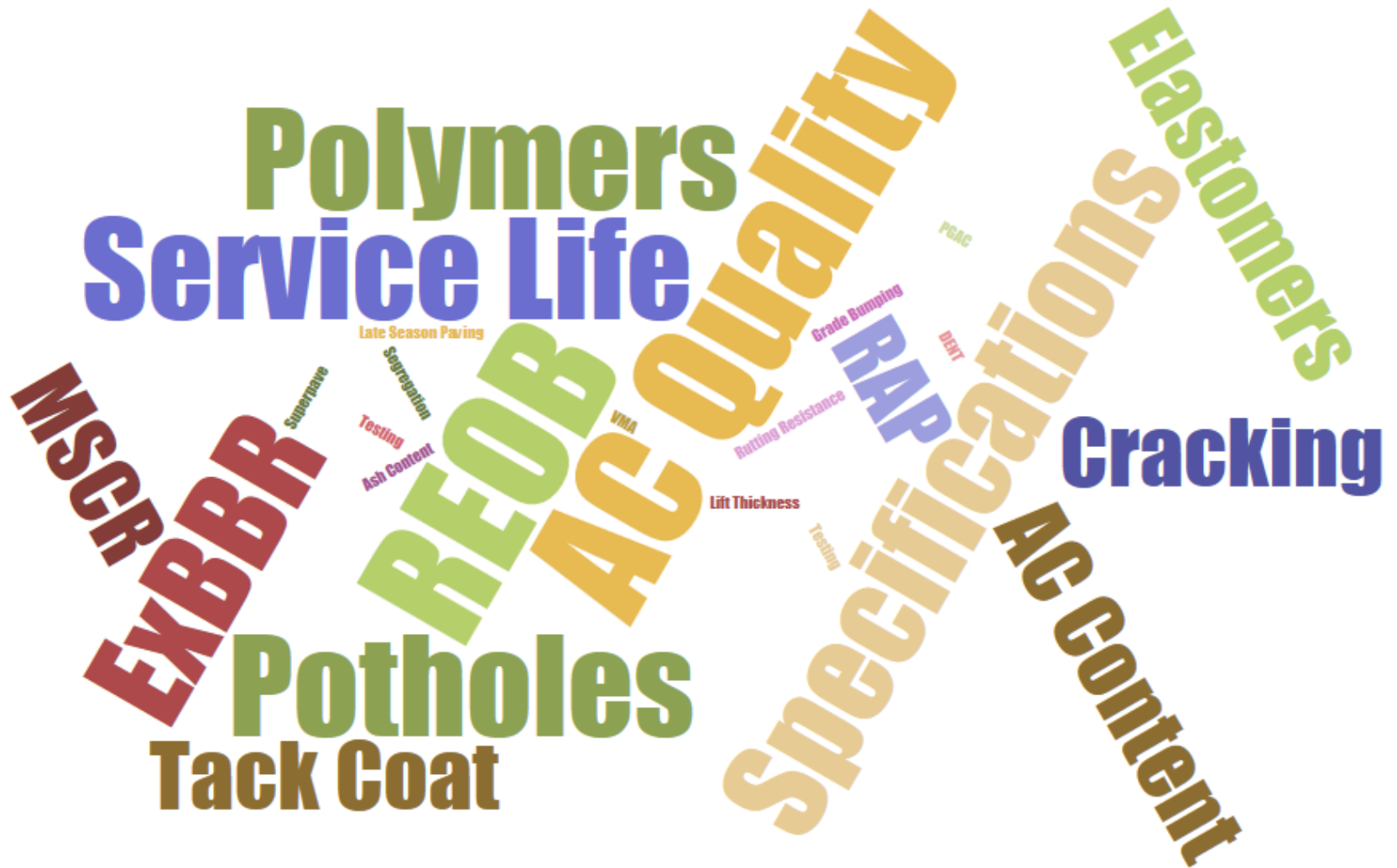
## Wellington County



HMA 31,550 tonnes

CIP 55,800 m<sup>2</sup>

# Municipal Issues/Concerns





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# Thank you

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