OGRA – OHMPA Liaison Update

Contractor Prequalification

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Municipalities Want This
Why Prequalification?

- All owners are looking for the highest quality job (that can be done at the least expensive price)
- Owners want to make sure that contractors bidding for the work are capable
  - The degree of complexity of projects may be different
  - Equipment and manpower requirement for project may be different
- In the end, owners want to work with HMA contractors to create quality projects
Who Asked for Help?

- Large and small municipalities alike asked for the Committee to develop a prequalification document.
- Not all municipalities are blessed with asphalt technical staff.
- Owners are having issues with the finished product.
- Owners are having issues with contract maintenance work being completed.
How Long Should Projects Last?

- A minimum of 15 years, but hopefully 20 to 25 years

<table>
<thead>
<tr>
<th>Initial Investment</th>
<th>Years of Service</th>
<th>Cost Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 7 Million</td>
<td>5</td>
<td>$ 1,400,000</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>$ 700,000</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>$ 467,000</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>$ 350,000</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>$ 280,000</td>
</tr>
</tbody>
</table>
The Document

- Intended to be a template to be built on by each municipality
- Provides municipalities with ideas on how best to complete a prequalification for what they need
- Includes a tiered level evaluation for Contractors, submission requirements, evaluation criteria, anticipated contracts, term of contract, etc.
Tiered Level for Contractors

- The municipality can set up the tiered level system how best suits their needs
  - Level I – projects in value in excess of $500,000
  - Level II – projects in value between $100,000 and $500,000
  - Level III – projects in value less than $100,000
Submission Requirements

- A letter indicating the level the Contractor is applying for
- A signed copy of the Statutory Form of Declaration
- A completed Canadian Construction Documents Committee (CCDC) 11 form – also covers past work experience
- Resumes of supervisory staff to be employed on the contract work
- Methods of quality control of paving work
Submission Requirements

A Certificate of Clearance from WSIB

A current CAD-7 Calculations Safety Record from WSIB

A letter from a Bonding company stating the Contractor’s capacity to obtain bonds for the values required

Health and safety policy

Contractor’s capability to manage projects and schedules internally.
## Evaluation Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A letter indicating which Level Contractor to be prequalified for</td>
<td>3</td>
</tr>
<tr>
<td>A completed and signed copy of the Statutory Form of Declaration</td>
<td>3</td>
</tr>
<tr>
<td>A completed CCDC 11 form with the required experience</td>
<td>30</td>
</tr>
<tr>
<td>Resumes of Contractor’s supervisory personnel</td>
<td>15</td>
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<tr>
<td>Methods of quality control of asphalt</td>
<td>15</td>
</tr>
<tr>
<td>A Certificate of Clearance from WSIB</td>
<td>3</td>
</tr>
<tr>
<td>A current CAD-7 Calculations Safety Record from WSIB</td>
<td>3</td>
</tr>
<tr>
<td>A letter from the Contractor’s Bonding company</td>
<td>3</td>
</tr>
<tr>
<td>Health and Safety Policy</td>
<td>10</td>
</tr>
<tr>
<td>How the Contractor manages projects and schedules internally</td>
<td>15</td>
</tr>
</tbody>
</table>
Other Information to Provide Contractors

- The anticipated projects that will be covered by the prequalification
- The term of the prequalification
- That Contractors can work their way up the Level system as they gain experience, equipment, etc.
What’s Next

- Sub-committee to finalize the draft document and circulate to the whole committee for final comments
- Forward to a lawyer for review and comment
- Provide to the member municipalities for their use
Questions
OGRA – OHMPA Liaison Update

Longitudinal Joints

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12 year old pavement

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Ontario Activities

- OHMPA – MTO Task Group to look at longitudinal joints
- MTO produced a report outlining activities from design to award stage that allow for the construction of better longitudinal joints
- Available on the web
  - Construction of Longitudinal Joints In Flexible Pavements - Design Guidelines - MERO-033
- Industry waited for FHWA-AI research report to produce the Best Practice Guide
What is the Problem?

Texas Transportation Institute
Project 0-1757

88.5 % 93.0% 91.0%

May 2013
Effect of Voids on Pavement Life

![Graph showing the effect of pavement voids on service life. The graph indicates a decrease in service life as the percentage of pavement voids increases.](image-url)
and then there’s permeability
Sometimes Catastrophic
The Best Longitudinal Joint

Echelon Paving

Rolled Hot

May 2013
Follow Good Paving Practice

- Balanced operations
  - Plant, trucking and paving all working in a coordinated manner to ensure that the paver never stops

- Tack Coat
  - All surfaces including the joint

- Layout issues
  - There must be enough space (1.5 m) on each side of the paver to allow for proper construction of the joint
Follow Good Paving Practice

- End Gate always down
  - Provides confinement and helps with density
- Vibration on screed always on
  - Provides initial densification
- Early project calls
  - Allow the work to be carried out in favourable weather conditions
Luting the Longitudinal Joint

This lute person is doing a great job
Tough to get proper overlap (25 mm) with next pass
Lift Thickness

- Compaction is the key
  - One of the most important aspect is lift thickness to maintain adequate temperature for compaction
  - Time available for compaction decreases as lift thickness decreases
    - Less time available on HMA than granular substrate
    - Less time available if windy
    - Less time available if wet or frozen
  - PaveCool (http://www.dot.state.mn.us/app/pavecool/index.html)
Adequate Lift Thickness
to Achieve Mat density

- Lift thickness is also dependant on the nominal coarse aggregate size
- NCAT Study – 3x NMAS for fine graded mixes
  – 4x NMAS for coarse graded mixes
- Minimum lift thicknesses

<table>
<thead>
<tr>
<th>Mix Type</th>
<th>NMAS (mm)</th>
<th>3x NMAS (mm)</th>
<th>4x NMAS (mm)</th>
<th>Range of Lift Thickness (mm)</th>
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</thead>
<tbody>
<tr>
<td>SP 9.5</td>
<td>9.5</td>
<td>29</td>
<td>38</td>
<td>30 to 40</td>
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<tr>
<td>SP 12.5</td>
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<td>38</td>
<td>50</td>
<td>40 to 50</td>
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<tr>
<td>SP 19</td>
<td>19</td>
<td>57</td>
<td>76</td>
<td>60 to 80</td>
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<tr>
<td>HL 3</td>
<td>13.2</td>
<td>40</td>
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<td>40 to 55</td>
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<td>HL 4</td>
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<td>48</td>
<td>64</td>
<td>50 to 65</td>
</tr>
<tr>
<td>HL 8</td>
<td>19</td>
<td>57</td>
<td>76</td>
<td>60 to 80</td>
</tr>
</tbody>
</table>
1st Roller Pass on Unsupported Edge
Overhang 50 mm to 125 mm
Rolling the Supported Edge
(many different opinions and approaches)

Stay off the Joint by 6” with 1st Pass to Avoid Bridging,

but, watch for stress cracks along the edge of the drum. May be more of a concern with rolling unsupported edge.
Thank You
Sealing the LJ