

USE IN ALL TENDERS SPECIFYING ASPHALT CONCRETE PAVEMENT - SUPERPAVE

(i) **AMENDMENT TO SPECIFICATION 3.53, ASPHALT CONCRETE PAVEMENT - SUPERPAVE, RE: WARM MIX ASPHALT**

i) The following is added to Section 3.53.2, MATERIALS:

3.53.2.5 Warm Mix Asphalt

Warm Mix Asphalt (WMA) technologies allow the production and compaction of regular asphalt concrete pavement at reduced temperatures. The term WMA technology is inclusive of a wide variety of additives and foaming systems.

The Department will allow ACP to be produced using a WMA technology subject to the following conditions:

- (i) *The WMA product to be used is selected from those listed on the Alberta Transportation Products List.*
- (ii) *The Contractor informs the Consultant of his intent to utilize WMA technology a minimum of two weeks prior to the planned start of ACP production. Information shall include the WMA technology to be used, including additive rate and the method of incorporation into the asphalt mix or mixing operations.*

Mixing and compaction temperatures shall be chosen by the Contractor in accordance with Subsection 3.53.5.1, Equipment.

Unless otherwise noted, additional costs associated with the use of a WMA technology including, but not limited to, mix design, quality control testing and/or equipment modifications shall be the Contractor's responsibility. Accepted ACP production using a WMA technology will be paid for at the applicable ACP unit prices bid. No separate or additional payment will be made for using a WMA product or technology.

ACP produced using a WMA technology will be subject to all existing Specifications. The Department may disallow the use of any WMA technology which is deemed responsible for producing defective work as described in Subsection 3.53.6.3, End Product Rejection.

Contractors are advised that the Shell Thiopave product, which contains both a sulphur additive and a WMA additive, has significantly different material properties from that of ACP and is not covered under this Specification. Proposals for using Thiopave shall be submitted under the requirements of Section 1.2.11, Contract Design Change Proposals, of Specification 1.2, General.

- ii) The following is added to Section 3.53.3, ASPHALT MIX DESIGN AND JOB MIX FORMULA:

3.53.3.5 Warm Mix Asphalt Technology

3.53.3.5.1 General

Mixes to be produced using a WMA technology shall also meet the following design requirements.

In all cases, the Contractor shall provide a complete mix design, including an evaluation for moisture susceptibility, using the specified asphalt binder without the WMA additive.

In cases where a WMA product is added to the asphalt cement or to the asphalt mixture, a separate mix design including an evaluation for moisture susceptibility will be required to confirm compliance to the specified mix design criteria.

The mix designer shall identify the mixing and compaction temperatures used for forming the design specimens.

The Department will not consider the use of any proposed WMA product which results in a design binder content that is more than 0.1% below the corresponding value for the ACP mix without the WMA additive.

- iii) The following is added to Subsection 3.53.5.1.2, Mixing Plant:

All equipment used for producing WMA shall be calibrated. WMA additive products which include separate pumping and metering systems shall be electronically interlocked with the operating controls of the mixing plant.

The Contractor shall provide the Consultant with copies of all invoices or bills of lading for WMA products added to the asphalt cement or mix in the field.

Plants using an injection foaming system shall be calibrated and operated according to recommendations from the plant Manufacturer or equipment supplier.

Asphalt binders used for water injection foaming shall not include anti-foaming additives.