

AMENDMENT TO OPSS 313, APRIL 2021

Special Provision No. 103F03M

September 2024

313.03 DEFINITIONS

Section 313.03 of OPSS 313 is amended by deleting the definitions of “**Design Lift Thickness (T_D)**” and “**Lift Thickness**” in their entirety and replacing them with the following:

Design Lift Thickness (T_D) means the thickness in millimetres as specified in the Contract Documents of a specified lift of asphalt mix measured by square metres.

Lift Thickness means the thickness in millimetres, measured according to LS-294, of a single lift of asphalt mix measured by square metres.

313.07 CONSTRUCTION

313.07.07 Placing Hot Mix Asphalt

313.07.07.02 Paving

313.07.07.02.02 Paving in Echelon

Clause 313.07.07.02.02 of OPSS 313 is amended by deleting the first paragraph in its entirety and replacing it with the following:

For the purpose of laying leveling, binder and surface courses as required under this Contract, paving in echelon [* Designer Fill-in, See Notes to Designer] for [** Designer Fill-in, See Notes to Designer].

[*** Designer Option, See Notes to Designer].

313.07.09 Sampling

313.07.09.04 Compaction

Clause 313.07.09.04 of OPSS 313 is renamed as ‘Compaction and Lift Thickness’ and is amended by the addition of the following:

All areas of hot mix paving specified in the Contract Documents, including paved shoulders, shall be measured for lift thickness with the following exceptions:

- a) Detours and other temporary pavement.
- b) Hot mix asphalt miscellaneous.
- c) Bridge decks.

[**** Designer Option, See Notes to Designer]

313.07.09.06 Lift Thickness

Clause 313.07.09.06 of OPSS 313 is deleted in its entirety.

313.08 QUALITY ASSURANCE

313.08.01 Acceptance Criteria

313.08.01.02 Mix Properties and Compaction

313.08.01.02.04 Referee Testing

Clause 313.08.01.02.04 of OPSS 313 is amended by the addition of the following:

When the Contractor invokes the referee for compaction and the tender item is measured in square metres, the Contractor shall consider to invoke the lift thickness referee of the same subplot at the same time with the referee for compaction. If the Contractor elects not to invoke the lift thickness referee of the subplot, they shall not be allowed to invoke the lift thickness referee of the subplot when the referee for compaction has been completed.

313.08.01.06 Lift Thickness for Square Metre Tender Items

313.08.01.06.01 Lot Size

Clause 313.08.01.06.01 of OPSS 313 is deleted in its entirety and replaced by the following:

The lot size shall be the same as the lot size for compaction cores. Each lot shall be divided into sublots which shall be the same as the sublots for compaction cores. A minimum of three sublots are required for each lot.

313.08.01.06.03 Basis of Acceptance

Clause 313.08.01.06.03 of OPSS 313 is deleted in its entirety and replaced by the following:

The acceptance of lift thickness is based on subplot lift thickness measurements from compaction core samples and lot mean lift thickness based on the average of all sublots' lift thicknesses in the lot.

Sublot lift thickness shall be acceptable if they are equal to or greater than the minimum subplot lift thickness as specified in Table 8. The subplot shall be deemed rejectable and shall be repaired if the lift thickness measurement is less than the minimum subplot lift thickness as specified in Table 8.

When a lift thickness lot contains any subplot that is deemed rejectable, the lot is rejectable until the subplot has been repaired and re-evaluated as acceptable. When the Contract Administrator allows a rejectable subplot to remain in place without repair, the subplot shall be subjected to a payment reduction according to Formula 16 in the Payment Adjustment for Lift Thickness clause. A subplot lift thickness measurement for a rejectable subplot that receives a payment reduction shall not be used to assess the lot mean of the lift thickness.

The Contract Administrator shall calculate the lot mean lift thickness to one decimal point according to LS-100, and the lot thickness payment adjustment shall be based on the lot mean thickness according to Table 9. If the lot mean lift thickness for the surface course is less than 85% of the T_D , the lot is rejectable.

313.08.01.06.04 Referee Testing

Clause 313.08.01.06.04 of OPSS 313 is deleted in its entirety and replaced by the following:

An individual lift thickness measurement may be challenged by requesting referee testing in writing to the Contract Administrator within five Business Days after receiving the subplot lift thickness measurement.

When referee testing for lift thickness is invoked and completed, the referee sample will be kept for possible referee testing for compaction if invoked by the Contractor at a later stage of the Contract.

The referee lift thickness measurement shall be considered binding and shall override the original QA lift thickness measurement for assessment of the lot mean and subplot's lift thickness and to determine the payment adjustment of the lot mean lift thickness.

313.10.01.07 Payment Adjustment for Lift Thickness

Clause 313.10.01.07 of OPSS 313 is deleted in its entirety and replaced by the following:

The payment adjustment for lift thickness shall apply to all placed and compacted HMA measured by square metre tender items using the area representing the lot. The formulae provided in Table 9 shall be used to calculate the thickness payment adjustment for each lot.

When a rejectable subplot remains in the work without repair, the rejectable lifts in the subplot shall be subject to a payment reduction. The thickness payment adjustment for each rejectable lift shall be:

$$PAs = 0.5 \times (\text{subplot quantity} \times \text{Contract price}) \qquad \qquad \qquad (\text{Formula 16})$$

where:

PAs = subplot payment adjustment for each rejectable lift

subplot quantity = the area of the subplot represented

Contract price = the Contract price of the tender item for the lift

Table 2 of OPSS 313 is deleted and replaced by the following:

TABLE 2
Sample Size and Frequency

Material	Sample Size	Frequency of Sampling
SMA mixes, Superpave 9.5, 12.5, 12.5FC 1, 12.5FC 2, and 19.0 (Note 1)	20 to 30 kg or 30 to 40 kg (Note 2)	Every subplot
Superpave 25.0 and 37.5 (Note 1)	25 to 35 kg or 35 to 45 kg (Note 2)	Every subplot
HMA Compaction and Lift Thickness Cores	150 to 200 mm diameter	Every mix properties subplot
HMA Aggregates for Density Testing	Coarse aggregate 10 kg Fine aggregate 5 kg RAP 5 kg	First sample to be taken at least 10 Days prior to producing first HMA lot; second sample at 15,000 tonnes; thereafter every 20,000 tonnes or when new samples requested
SMA mixes for draindown testing	3 to 5 kg	Once per lot
WMA for moisture sensitivity testing (Note 1)	50 kg	3 sublots per mix type
<p>Notes:</p> <ol style="list-style-type: none"> Each material sample receptacle shall have a maximum mass of 30 kg. For ease of handling, especially when the larger sample size is required, splitting of material at the paving site is permitted such that a sample is contained in a maximum of two receptacles whose total mass does not exceed the maximum specified above. Once delivered to testing laboratories, testing is allowed from a single receptacle. If a single receptacle contains insufficient material to carry out the full suite of tests required, combine the material from the two receptacles. The larger sample size shall be applicable when samples are designated for testing to the maximum number of gyrations. The frequency of the larger samples shall be one per lot, as designated by the Contract Administrator. 		

Table 9 of OPSS 313 is deleted and replaced by the following:

TABLE 9
Lot Thickness Payment Adjustment

Course	Lot Mean Lift Thickness, T_L	Thickness Payment Adjustment, PA_T (Note 2)
Surface Course (Note 1)	$T_L \geq [0.85 \times T_D]$	$PA_T = \text{lot quantity} \times \text{price} \times \{[1.000 - (T_L / T_D)] \times 2.0\}$
Binder Course	$T_L \geq [0.95 \times T_D]$	$PA_T = \text{lot quantity} \times \text{price} \times \{[1.000 - (T_L / T_D)]\}$
	$[0.95 \times T_D] > T_L \geq [0.85 \times T_D]$	$PA_T = \text{lot quantity} \times \text{price} \times \{[1.000 - (T_L / T_D)] \times 2.0\}$
	$T_L < [0.85 \times T_D]$	$PA_T = \text{lot quantity} \times \text{price} \times \{[1.000 - (T_L / T_D)] \times 3.0\}$
<p>where:</p> <p>T_L = lot mean lift thickness</p> <p>lot quantity = the sum of all sublots' areas in the lot (excluding any rejectable subplot remained in the work without repair)</p> <p>price = the Contract price of the hot mix tender item</p>		
<p>Notes:</p> <ol style="list-style-type: none"> 1. A lot is rejectable when the surface course $T_L < [0.85 \times T_D]$. 2. When $T_L > T_D$, (T_L / T_D) becomes 1 in the formulas 		

NOTES TO DESIGNER:

* **Designer Fill-In**

Insert phrase a, b, or c as recommended by the Regional Operations Office.

- a) shall not be used
- b) shall be used
- c) may be used, at the Contractor's option

** **Designer Fill-In**

Regional Operations Office to recommend wording to be inserted such as "whole Contract", or Contract specific limits, lanes, mix types, or staging, which will describe the portion of Contract for which the paving in echelon option selected above applies.

*** **Designer Option**

When partial paving of the full pavement width is not permitted, insert amended Clause 313.07.07.02.05 as stated below (if partial paving is permitted, disregard Designer Option):

313.07.07.02.05 Partial Paving of Full Pavement Width

Clause 313.07.07.02.05 of OPSS 313 is deleted in its entirety and replaced with the following:

Partial paving of the full pavement width is not permitted.

**** **Designer Option**

When required, and in consultation with the Regional Geotechnical Section, insert the following and fill-in the additional areas by station that are to be exempt from lift thickness testing including, but not limited to areas that may require more or less thickness to match existing surfaces or road side features, areas requiring hand work, and entrances. If not required, disregard Designer Option.

313.07.09.04 Compaction and Lift Thickness

Clause 313.07.09.04 of OPSS 313 is amended by the addition of the following:

- d) The following additional stations and/or roadways:
 - i. [Fill-In applicable areas.]
 - ii. [Fill-In applicable areas.]

WARRANT: Apply on paving contracts with total HMA quantity of 40,000 to 120,000 square metres (5,000 to 15,000 tons) when recommended by the Regional Geotechnical Section and Quality Assurance Section.