SUPERPAVE GYRATORY COMPACTION – PLANT MIX (Alberta and Yukon)

IMPORTANT NOTE: Type B Superpave laboratories are required to carry out Gyratory compaction and appropriate subsequent testing using Plant Mix samples as the starting material.

1. PLANT SUPERPAVE SAMPLES (PSS)

Two boxes of Superpave Plant Mix for two different mixes, namely **I-PSS-(N)-a and I-PSS-(N)-b for the 19.0mm mix** and **II-PSS-(N)-a and II-PSS-(N)-b for the 12.5mm mix** have been provided

2. SAMPLE PREPARATION

The content of each pair of boxes for each mix contain the same type of mix. In preparation for testing the two portions are combined to represent one uniform sample of each mix for all required tests.

3. MAXIMUM SPECIFIC GRAVITY (G_{mm})

Determine the G_{mm} of each mix type using D2041. Report the value of each of the two replicates (i) and (ii) to three decimal places.

4. GYRATORY COMPACTION

The specimen preparation parameters for this testing are as follows:

	19.0mm (I-PSS)	**12.5mm (II-PSS)**
Mass of individual gyratory specimen, g	4950± 40	4835 ± 40
Recompaction temperature, ºC	150	150
Initial number of gyrations, N_{ini}	9	9
Design number of gyrations, N_{des}	125	125
Maximum number of gyrations, N_{max}	205	205
Internal angle of gyration, °	1.16°±0.02°	1.16°±0.02°

4.1 Prepare TWO specimens to the ***design number of gyrations***
4.2 For each mix type, prepare two specimens to the ***maximum number of gyrations*** (one specimen is acceptable if sample size is insufficient to prepare two) using the same re-compaction temperature.

5. BULK DENSITY AND % G_{mm} (Compaction Degree)

Prepare specimens, determine the bulk density of the specimens and complete all necessary calculations, ***using applicable ASTM and AASHTO procedures***, to obtain $\%G_{mm}$ at N_{ini}, $\%G_{mm}$ at N_{max}. and the % air voids at N_{des}.
Report the values of bulk densities to three decimal places.
Report the values of $\%G_{mm}$ to one decimal place

The Gyratory Plant Mix test results shall be reported online and submitted by **January 5 2018**. An example of a completed report form is shown below.

Year 2018 CCIL Correlation

Hard copies of the report forms and work sheets must be submitted by **January 5 2018** by mail or courier to:

Nabil Kamel, M.A.Sc., P.Eng.
CCIL Program Manager
3410 South Service Road, Suite 104
Burlington, Ontario, L7N 3T2
Tel: 289-337-8888: Fax: 289-337-8889: email: nkamel@ccil.com

DO NOT send reports and worksheets by fax

2018 CCIL CORRELATION - EXAMPLE REPORT ALBERTA and YUKON

Testing Admin Information

your assigned CCIL Lab No.: **AB99**

•	Lab Name (include Branch or Mobile #)	**Apex Construction**
•	E-mail Address	**enstein@apex.com**
•	Reported by (Contact Name)	**Frank Enstein**
•	Phone Number (Contact)	**(999) 999-9999**
•	Tested by (Name(s))	**Jim Dandy**
•	Results Reporting Date	**January 5 2018**

Gyratory Compaction - Plant Mix

	Manufacturer:	Best	Model:	1234	S/N:	12345

	Results for:	I-PSS			II-PSS		
		(i)	(ii)	Average	(i)	(ii)	Average
•	*M S G (G_{mm})*	**2.615**	**2.625**	**2.620**	**2.600**	**2.610**	**2.605**
•	*B R D @ N_{des}*	**2.525**	**2.535**	**2.530**	**2.52**	**2.526**	**2.523**
•	*B R D @ N_{max}*	**2.546**	**2.566**	**2.556**	**2.540**	**2.550**	**2.545**
•	*% G_{mm} @ N_{ini}*	**89.2**	**89.6**	**89.4**	**88.8**	**89.2**	**89.0**
•	*% G_{mm} @ N_{max}*	**97.4**	**97.8**	**97.6**	**97.7**	**97.7**	**97.7**
•	*% Air Voids (@ N_{des})*	**3.4**	**3.4**	**3.4**	**3.1**	**3.2**	**3.2**

Compactor Calibration (Indicate with an "X" the applicable setting).		
Internal Angle (1.16 deg.)	**X**	
External Angle (1.25 deg.)		