

Atlantic Canada Superpave Implementation update

CUPGA OTTAWA – NOV 15, 2017

General Comments

- ▶ Atlantic Canada has varying levels of implementation of the Superpave system.
- ▶ Mostly driven by perceived need, and local materials availability.
- ▶ Superpave implementation in 3 Parts
 - ▶ Aggregate Specifications (Fine aggregate angularity, Fractured faces etc)
 - ▶ Binder specification (PG Graded Binder)
 - ▶ Mix Specification (gradation bands , gyratory compactors, N numbers)

Newfoundland & Labrador

- ▶ Superpave implementation limited to PG Binder specifications
- ▶ In general, single use of standard binder, PG 58-28
- ▶ There is some alteration of specification for Superpave aggregates and softer binders, typically implemented by Consultant project managers, most commonly in Labrador
- ▶ Starting to consider more typical aggregate specifications, but balanced by the availability of materials and perceived contractor capabilities.
- ▶ If Ken Pyke or other DOT authority would like to comment please do so.

Prince Edward Island

- ▶ Superpave specifications are limited to the use of a single binder PG 58-28
- ▶ Implementation limited by the availability of aggregates on the island, All quarried material needs to be imported.
- ▶ Generally dealing with small traffic volumes and program size.
- ▶ Terry Kelley's comments?

Nova Scotia

Mix and Aggregates

- ▶ NSTIR incorporated the elements of the Superpave Aggregates recommendations into their specification And kept elements of existing specification including gradation bands and LA abrasion tests (Max 30)
- ▶ 75 blow Marshall method was maintained due to the amount of work done from portable plants and portable field labs, due the cost and practicality of implementation.
- ▶ Nova Scotia has abundant hard rock formations with pit and quarry guidelines such that high quality aggregates are readily available to the marketplace.
- ▶ NSTIR continues to use T283 at a 73% acceptance for required use of Antistrips.
- ▶ There is utilization of gyratory compactor at 75 gyration equivalent in applications where Mix air voids are desired for acceptance (Halifax Stanfield Airport), NSTIR is considering adopting this Gyratory compactor with a specification change.

Nova Scotia

PG Binder usage

- ▶ Nova Scotia nearly almost exclusively specifies PG 58-28 binders due to their typically mild winter climate
- ▶ NSTIR does not grade bump with their RAP specification as testing performed on Typical RAP sources does not indicate significant hardening and oxidation to require a bump at the max threshold (25%)
- ▶ PG 64-28 Binders have been used in high traffic/loading applications, including Halifax Stanfield Airport, bridges etc, exclusively specifying polymer modified.

New Brunswick

- ▶ New Brunswick Fully Adopted the Superpave Aggregates, Binder and Mix designs specifications including Air Voids for payment.
- ▶ Originally was 100% method specification but now transitioned into both Large Job and Small job ERS. With Air voids for payment.
- ▶ NBDTI maintains a comprehensive gyratory compactor calibration program and a centralized Laboratory to monitor and control application and resolve disputes.
- ▶ Municipalities apply the NBDTI specification to their projects generally with consultant oversight of programs

New Brunswick Binder Usage

- ▶ New Brunswick, particularly the NBDTI incorporated the widest variety of PG Binders, mostly due to the harsher climates and varying geography in the province.
- ▶ In general, NBDTI specifies PG 58-28 in the south and 58-34 in the North.
- ▶ They Specify PG 52-34 for use in Rap mixes at the 30% threshold (grade bump)
- ▶ A common usage for high traffic applications is 64-34 PMA for Performance specification. Matt to elaborate

Atlantic Superpave Usage

SUMMARY

- ▶ The Atlantic Provinces have adopted home grown solutions for the asphalt materials specifications and utilized the portions of the Superpave specifications derived from the NCHRP program to suit their individual needs.
- ▶ The region is supplied neat Superpave binders, and entities that desire improved or different performance choose to implement elements of the Superpave guidelines based on individual cost vs. benefit considerations.