

Warm Mix Asphalt Site Report

Job No: NBDOT Rte 144 (10-0796)
Date (D/M/Y): Aug 25, 2010
Other Job Reference: N/A
Contractor/Agency: Ray's Paving Ltd/NBDOT
Location: Rte 144 in North West N.B. Doucet Rd to Ste-Anne Village limits
Job Description: 3GV DAT ET
Milling followed by WMA-D Surface Mix.

Arrival Time: 11:24AM
Departure Time: 7:30PM

Weather Conditions: A mix of sun and clouds in the A.M. Mostly cloudy in early P.M; highs of 27C. Showers started @ 4:20PM; plant shut down shortly after.
Length of Job: 11.3km
Total Tonnage: 14,200MT total job; 1100MT DOT and 100MT of private today
Stations: NA

WMA General Info:

- Mix Type: Type D ½" Surface Mix
- A/C Type: Evothem 58-28 3GV
- A/C Source: McAsphalt Valleyfield
- Temp. of A/C in Storage Tanks: ~150C
- Antistripping Type and Amt: @ 0.5%
- McAsphalt Ticket No(s): NA- various
- WMA Discharge Temperature: 125-130C requested
- WMA Laydown Temperature: 115-120C typical behind spreader today; target 115-125C
- Compaction Equipment Used: DD Vib Breakdown, Rubber Tire intermediate, Steel Finish



EVOTHERM - Warm Mix Asphalt Site Report

(Cont'd)

**Table 1: General Tack Coat and WMA Checklist
(Re: Bond and Compaction Related Checklist)**

Description of Task	Yes	No	Comments
Was the distributor's application of tack to the existing roadway's surface homogenous? Take note of tack temperature and type.	X		RS-1; very good coverage and streak free; excellent job.
Were all surfaces clean prior to tacking (longitudinal jts, transverse jts and roadway)?	X		The surface was quite clean which resulted in a good bond and no pick-up.
Were the distributor's spray nozzles between 15 to 30 deg. and all at the same angle?	X		Great coverage and no streaking
Was the surface free of signs of moisture?	X		
Were the rollers keeping up with the spreader?	X		Good rolling techniques and keeping up well; good speed
Did the spreader stop frequently to wait for WMA trucks?		X	No because shuttle buggy was used.
Was a shuttle buggy used to promote continuous paving and to ensure a more homogenous heat distribution and better overall compaction?	X		Paving and plant production were in sink and shuttle buggy ensured continuous paving
Were the WMA trucks tarped?	X		

The above checklist focuses only on tack coat issues (i.e. bond issues) and factors which influence compaction and the overall performance of the PG Warm A/C's and polymer modified Warm A/Cs. Other issues such as segregation, profilograph smoothness, mix results, etc, are not directly A/C related and as such are not covered.

McAsphalt Representative: Alain Cormier, P. Eng.

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Warm Mix Asphalt Site Report (Cont'd)

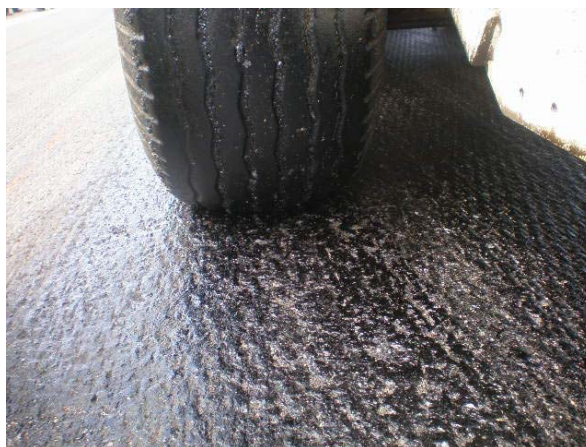
Additional Comments or Concerns:

- This job is an ERS / End Result Spec (i.e. Item 261)
- Even though the TSR ratio was acceptable during the mix design stage (~82% > 75% min specified) the NBDOT requested that antistrip be added just to be safe. For that reason the NBDOT paid for its addition to the liquid. However, the agency did state that regular HMA mixes without antistrip, with this rock, would have much lower TSRs. This is good evidence confirming that our Evotherm additive can greatly improve the stripping resistance.
- Production today was @ ~130MT/hr
- FYI Lot #1 from last week had 95% density = 100% bonus!!
- WMA mat was very stable. See pic 1.



Pic 1: DD Vib turning off very stable unconfined edge

- Tack was very uniform in the NBL and did not pick-up. See pic 2.



Pic. 2: Tack uniform in NBL with no pick-up on shuttle buggy tire

- Ray's Paving construction practices were very good. From a workmanship perspective they were doing very well:
 - o Good confinement with end gate in correct position
 - o Auger sensors well positioned for continuous movement
 - o Paver speed matched to plant production to avoid stops
 - o Trucks well timed and always available
 - o Roller speeds good
 - o Rollers were using the NBDOT 2010 new rolling pattern at the centerline joint to achieve better centerline densities
 - o Rubber tire gradually warming tires, had good skirts, propane heaters, and had zero pick-up; good rolling speed.
 - o Rollers were staying in their zones
 - o Transverse cold joints very smooth
 - o Fluff factor of confined mat looked bang on
 - o Overlap of second/confined mat was good with very little crushing of aggregate once rolled with steel.

- Mat texture behind screed was uniform. See pic. 3:



Pic 3: Uniform texture behind screed



Pic 4: Shuttle buggy ensuring constant paver movement and smoother mat

Please do not hesitate to call if you have any questions or comments.

Regards,

Alain Cormier, P.Eng.
McAsphalt Atlantic Marketing