

**Ministry of Transportation**

Soils and Aggregates Section  
Materials Engineering and Research  
Office  
1201 Wilson Avenue  
Room 220, Building C  
Downsview, Ontario M3M 1J8  
Tel.: (416) 235-3734  
Fax: (416) 235-4101

**Ministère des Transports**

Section des sols et des agrégats  
Bureau de la recherche et du génie en  
matière de matériaux  
1201, rue Wilson  
Bureau 220, édifice C  
Downsview (Ontario) M3M 1J8  
Tél.: (416) 235-3734  
Télééc.: (416) 235-4101



## **MEMORANDUM**

To: Stephen Lee  
Head, Pavements and Foundations Section  
Room 232, Building C, 1201 Wilson Avenue

Date: April 2, 2014

From: Soils and Aggregates Section  
Materials Engineering and Research Office  
Room 220, Building C, 1201 Wilson Avenue

File #: 3162-2-4-21

**Re: Skid-Resistance Surveys, 2014**

It is requested that skid-resistance surveys be done for the 2014 season for the following test sections:

### **SP 12.5 FC2, SMA Mixes**

**Hwy. 401, Contract No. 2009-3013**

**Westbound Lanes from Station 24+281 to 23+906 (approx. 375 m long) just East of Putnam Road in Lanes 2 and 3**

The test section includes the westbound lanes 2 and 3 for a distance of 375 m, just east of Putnam Interchange #208, County Road #30. Paved in early Fall 2009.

The 12.5 FC2 trial section consists of Canadian Wollastonite quarried gneiss coarse and fine aggregates (MAIDB No. G-02-124). The control pavement is comprised of Aecon trap rock from Marmora, used in coarse and fine aggregates.

### **Red Hill Valley Parkway, CNR Overhead Structure to Greenhill Avenue (Hamilton) Southbound and Northbound**

The paving job is located in both southbound and northbound lanes along the length of the project (Contract No. PW-06-243 [RHV]). The total section is approximately 7.5 km long. This is the first full-service municipal perpetual pavement in Ontario. The pavement is a 12.5 SMA and consists of Varennes quarried 12.5 mm stone, Varennes screenings, and E.C. King Filler. Paved in June 2007.

**Additional Skid Resistance Surveys, 2012**  
**Hwy. 401 Westbound, Contract No. 2012-4256-Starting From 1.65 km west of Halleck's Road Overpass Structure Finishing 2.2 km west of the overpass**

---

The trial section is located starting from Station 12+650 to finishing at Station 12+100. The trial is approximately 550m in length in both DL and PL.

The Superpave 12.5 FC2 trial section consists of Leveque Bros Sutherland Road Quarry coarse, chips and screenings fine aggregates (MAIDB No. B01-034). Signs are being erected at the Start and Finish of the trial. See map attached.

**Hwy 11, Contract No. 2013-5106**  
**Northbound Lanes, from due south of O'Brian Street north to Algonquin Ave.**

The test sections include both northbound lanes, from immediately south of O'Brian Street northbound to Algonquin Ave. Metal signs are erected at the beginning and ends of the trials.

Paved in late Fall of 2013. The first SP12.5 FC2 trial section consists of Nipissing First Nation (NFN) coarse and fine aggregates (S26-014). The control pavement to the south is Miller Patterson quarried coarse and fine aggregates.

Immediately to the north and adjacent to the NFN trial is the Allstone Quarry (D10-083) SP12.5 FC2 trial consisting of both coarse and fine aggregates. The control pavement to the north consists of SMA control at the intersection of Hwy 11 and 17. Location Map included.

**Hwy. 11, Contract No. 2009-5005, Northbound Lanes, North of Gravenhurst**

---

The test section includes both northbound lanes north of Doe Lake Road, Intersection 175, for approximately 400 m. Metal signs are erected along the beginning and ending of the trial section.

Paved in Fall 2009. The 12.5 FC2 trial section consists of Fowler Childs Quarry coarse and fine aggregates (MAIDB No. B17-113-02). The control pavement is comprised of Fowler Rosewarne quarried coarse and fine aggregates.

**Hwy. 11, Contract No. 2010-5004**  
**Northbound Lanes, North of Hwy. 118 to the Muskoka River**

---

The test section includes both northbound lanes, north of Hwy. 118, Intersection 182, for approximately 500 m. The test section ends at the bridge (Muskoka River). Metal signs are planned to be erected at both ends.

Paved in Fall 2010. The 12.5 FC2 trial section consists of Fowler Madill Quarry coarse and fine aggregates (MAIDB No. H05-025). The control pavement is comprised of Fowler Rosewarne quarried coarse and fine aggregates. See photos included.

**Hwy. 402, Contract No. 2011-3025**

**Westbound Lane 1 from Station 25+105 to 25+562 and Westbound Lane 2 from 25+105 to 25+577**

---

The test section includes the westbound lanes 1 and 2 just west of Sexton Road to Arkona Road.

Paved in Fall 2011. The 12.5 FC2 trial section consists of Badgeley Island Quartzite coarse and fine aggregates (MAIDB No. L13-031). The control pavement is comprised of Ontario trap Rock from Bruce Mines, used in coarse and fine aggregates. Location map included.

**Hwy. 17 (417), Contract No. 2009-4009**

**Eastbound Lanes 1 and 2 from 27+350 to 27+850**

---

The test section includes the eastbound lanes 1 and 2 just due east and west of Pinegrove Road (see attached map and photos)

Paved in Fall 2011. The 12.5 FC2 trial section consists of t. Cavanaugh's Lanark quarry coarse and fine aggregates (MAIDB No. C04-014). The control pavement is comprised of dolomitic sandstone coarse and fine aggregates from the Dibblee Quarry, Ottawa.

**Hwy. 11, Contract No. 2011-2023**

**Southbound Lanes 1 and 2 south of Stewart Construction's Aggregate Depot on the west side of Hwy. 11**

---

The test section includes both southbound lanes 1 and 2 between Stewart's Depot to Lacie Street Bridge. The trial ends at the Carlyon Road line.

Paved in Fall of 2011. The 12.5 FC2 trial section consists of Hall Construction Turtle Lake Quarry coarse and fine aggregates (MAIDB No. 008-118). The control pavement is comprised of Fowler Rosewame Quarry coarse and fine aggregates. Location map included.

**Hwy. 11, Contract No. 2011-5114**

**Southbound Lanes 1 and 2, South of Muskoka River Bridge to Hwy 118 (Exit no. 182)**

---

The test section includes both southbound lanes 1 and 2 between the Muskoka River Bridge and just before hwy. 118.

Paved in Fall of 2011. The 12.5 FC2 trial section consists of Fowler Whites Quarry coarse and fine aggregates (MAIDB No. H05-046). The control pavement is comprised of Fowler Rosewame Quarry coarse and fine aggregates. Location map included.

**HL3M, SP 12.5, 12.5 FC1 Mixes**

**Hwy. 11, Contract No. 2009-5128, from North of the Wabi River Bridge, North 500 Metres to the First Traffic Light**

---

The trial runs in both northbound and southbound lanes from approximately 50 metres north of the bridge towards New Liskeard and terminates at the traffic light.

The trial was paved on June 8, 2010 along a relatively straight part of the highway.

The 12.5 FC1 trial section consists of Miller Allstone quarried coarse and fine gneiss-granite aggregates (MTO MAIDB No. O10-083) with 10% Ethier Heino pit sand. The control material is Miller's SP 12.5 aggregate from a local source.

Metal signs have been erected at both north and south ends of the trial.

#### **Hwy. 17, Contract No. 2011-5631**

---

The test section is located on Hwy. 17 from Hwy. 11/17 interchange in North Bay easterly to Hwy. 94. The entire project is the test section.

Paved in Fall of 2011. The SP 12.5 FC1(regional) mix consist of coarse and fine aggregates from the Pioneer DBC Quarry (MAIDB No. N05-166).

#### **Hwy. 11, Contract No. 2010-5105**

---

The test section is located on Hwy. 11 from Red Squirrel Road North two kilometers towards Cemetery Road. Paved summer 2010. The suggested testing area is 500 m immediately north of Red Squirrel Road.

The SP 12.5 mix consists of processed Sherman Mine wasterock (Temagami) coarse and fine aggregates with Rosevelt sand (NTO MAIDB no. T16-003).

#### **Hwy. 11, Contract No. 2008-5113**

##### **From just north of Pevensey Road northbound to South of North Horn Lake Road**

---

The paving job is located in the northbound lanes of the new Hwy. 11 just north of Pevensey Road to south of North Lake Road in both lanes. The section is 500 m long.

Paved in July 2012. Superpave 12.5 FCI trial section consists of Fowler Boucher Quarry quarried coarse and fine aggregates (MAIDB No. K05-019). The control sections are before and after with- Fowler Madill quarried aggregates. See map and photos attached.

#### **Bruce Street, City of Sault Ste Marie**

---

The pavement section is located on Bruce Street, city of Ste Marie for Great Northern Road for approximately 500m to Salsbury Ave. This mix was placed in 2004 and I examined it on July 9, 2013. There were no pavement distresses noted.

The HL4 asphalt mix consist of Brandes Quarry HL4 quarried coarse and fine aggregates, including Branches sand (MAIDB No. S10-047). See map attached and photo.

**Hwy. 11, Contract No. 2010-6006**

The test section is located on Hwy. 11, Part A from 6.7 km west of Hwy. 587, westerly for 7.7 km, Part B from 12.7 km east of Hwy. 587, easterly for 1.6 km. Paved in August 2010.

The SP 12.5 mm mix consists of coarse and fine aggregates from the White Pit (MAIDB No. K17-037).

**Hwy. 11/17, Contract No. 2010-6014**

---

The test section is located on Hwy. 11/17 from 02 km west of Oliver Road, easterly for 13.1 km and Hwy. 130 Kaministiquia River Bridge, 9.8 km north of Hwy. 61. Paved in September/ October 2010.

The SP 12.5 mm mix consists of quarried coarse and fine aggregates from the Finmark Quarry (MAIDB No. S20-066) and blend sand from Lempiala Pit (MAIDB No. 012-095).

**Hwy. 11, Contract No. 2007-6008, East of Hwy. 587**

---

The test section is from 5.4 km east of the junction of easterly for 8.9 km. The entire SP 12.5 job is 8.9 km. Paved in September 2008. The trial section consists of Hansen Quarry coarse and fine aggregates chip with blend sand from their pit (MAIDB No. O12-085).

**Hwy. 11/17, Contract No. 2009-6007**

---

The test section is located on Hwy. 11, from Hwy. 61 from 0.2 km north of Arthur Street, northerly to Hwy. 11/17 for 2.9 km and Hwy. 11/17 from Hwy. 61 northerly to 0.6 km south of Balsam Street for 7.6 km. Paved in 2009. The best choice for skid testing is the southbound lane on the north end of the contract from 0.7 km south of Balsam Street for 1.1 km. Both southbound lanes could be tested.

The SP 12.5 mix consists of coarse and fine aggregates from the Taranis Cedar Creek pit (MAIDB No. K17-079) and sand from the Goodman Lake pit (MAIDB No. O12-095).

**Hwy. 102. Contract No. 2011-6023****From 0.2km east of the Junction of Hwy 11/17 (Sistonens), easterly for 25.8 km.**

---

The paving job is located just east of the Hwy 11/17 Junction for a total distance of 25.8 km. The entire contract is the trial.

Final paving should be completed by the end of August 2012. The superpave 12.5 mm pavement section consist of Pioneer Gauthier Quarry quarried coarse and fine aggregates (MAIDB No. S20-068).

**Hwy. 102, Contract No. 2011-6023 From 300m to the west of Hwy 589 and 102 junction and proceeds westerly for 500m**

The trial section is located 300m just west of the Hwy 589 and 102 Junction for a total distance of 500m.

Final paving should be completed by the end of August 2012. The Superpave 12.5mm trial section consist of Pioneer Copenhagen Quarry quarried coarse and fine aggregates (MAIDB No. T20-060).

*Original signed by Bob Gorman*

Robert G. Gorman  
Senior Aggregate Engineering Officer

cc: S. Lee  
N. Gilbert  
F. Soroye  
D. Schutte  
D. Sproule

RGG/mac  
April 2, 2014  
3162-2-4-21

Table 1: Test Sections to be Subjected to Skid-Resistance Surveys				Year To Be Surveyed											
Contract Number	Hwy.	Material	Source	Paved	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
PW-06-243	RHV	12.5 SMA	Demix Varennes Quarry Syenite	June 2007	-	-	-	-	-	X	X	X	X	X	X
2004-5001	400	HL3(M)	Magnetawan First Nation	August 2008	-	-	-	-	-	-	X	X	X	X	X
2000-0023	401	DFC	Hutcheson Sand and Gravel Ltd.	November 2000	X	X	X	X	X	X	X	X	X	X	X
2000-0036	401	DFC	MRT Aggregate Inc. (Havelock)	October 2002	X	X	X	X	X	X	X	X	X	X	X
2000-0210	11	HL1	Miller Paving Ltd. (Birches Road Quarry)	October 2000	X	X	X	X	X	X	X	X	X	X	X
2002-2013	7A	DFC	FPL (Mountain Lake) Granite	July 2004	-	-	X	X	X	X	X	X	X	X	X
2002-2013	7A	DFC	Danford Granite (Madoc)	August 2004	-	-	X	X	X	X	X	X	X	X	X
2002-5628	11	DFC	Fowler Construction Co. Ltd. (McDougall, Foley)	October 2002	X	X	X	X	X	X	X	X	X	X	X
2004-2260	401	SP 12.5 FC2	Miller Paving Ltd. (Patterson)	September 2004	-	-	X	X	X	X	X	X	X	X	X
2004-5117	55	SP 12.5	Pioneer Finni Gabbro	Fall 2005	-	-	-	-	-	X	-	X	-	X	X
2009-3013	401W	SP 12.5 FC2	Canadian Wollastonite	Fall 2009	-	-	-	-	-	-	-	X	X	X	X
2009-5005	11N	SP 12.5 FC2	Fowler Construction Co. Ltd. (Childs Quarry)	Fall 2009	-	-	-	-	-	-	-	X	X	X	X
2009-5126	11S	SP 12.5 FC1	Bruman Quarry	Fall 2009	-	-	-	-	-	-	-	X	X	X	X
2007-6008 (or Alternate)	11/17	SP 12.5	Bruno's Contracting Hansen Quarry	September 2008	-	-	-	-	-	-	-	X	X	X	X

RGG/mac  
March 21, 2011  
3162-2-4-21

Table 1: Test Sections to be Subjected to Skid-Resistance Surveys – cont'd				Year To Be Surveyed											
Contract Number	Hwy.	Material	Source	Paved	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alternate 2004-6000	11/17	SP 12.5	Bruno's Contracting Hansen Quarry	September 2007	-	-	-	-	-	-	-	X	X	X	X
2009-6007	11/17	SP 12.5	Taranis Cedar Creek Pit	2009	-	-	-	-	-	-	-	-	X	X	X
2010-5004	11N	SP 12.5 FC2	Fowler Construction Co. Ltd. (Madill Quarry)	Fall 2010	-	-	-	-	-	-	-	-	-	X	X
2010-6006	11	SP 12.5	Pioneer Construction Inc. (White Pit)	August 2010	-	-	-	-	-	-	-	-	-	X	X
2010-6014	11/17	SP 12.5	Pioneer Construction Inc. (Finmark Quarry)	Sept./Oct. 2010	-	-	-	-	-	-	-	-	-	X	X
2009-5128	11N	SP 12.5 FC1	Miller Paving Ltd., (Allstone Quarry)	June 2010	-	-	-	-	-	-	-	-	-	X	X

RGG/mac  
 March 21, 2011  
 3162-2-4-21