

TOWN OF AJAX
DESIGN CRITERIA

SECTION K
MINIMUM TESTING REQUIREMENTS

TOWN OF AJAX MINIMUM TESTING REQUIREMENTS

Revision Date: August 2008

<u>MATERIAL</u>	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
Native Material	Sewer Trench	Compaction	Min. every 15 m, every 0.6 m, 95% (514.07.10) 501.08.02	Street, distance from downstream M.H., distance above pipe or below final grade ie: Street A, MH23 + 30 m, 1.8 m above pipe
	Watermain	Compaction	Min. every 15 m, every 0.6 m, 95% (514.07.10) 501.08.02	Street, station, offset, distance above pipe or below finished grade ie: Street A, 0 + 310, 5.5 m Rt, 1 m above pipe
	Subgrade	Compaction	Min. every 15 m in a Z@ pattern, every 0.6 m 95% (501.08.02), 98% desirable in top 1 m	Street, Station, offset ie Street A, 0 + 105, 3.5 m Lt
	Watermain Road Crossings	Compaction	Each Crossing, every 0.6 m , 95% (514.07.10)	Street, Station
	Utility Trenches*	Compaction	Each Crossing, every 0.6 m , 95% (514.07.10)	Street, Station
* Utility crossings are to be installed prior to base asphalt				
	Service Trenches**	Compaction	Random Selection 25% of lots, every 0.6 m, 95% (501.08.02)	Lot Number
** If Storm and Sanitary Services are installed with mainline sewer, this requirement is waived. Only water service trenches will have to be reported separately				

<u>MATERIAL</u>	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
Granular Materials OPSS 1001, 1002, 1003, 1004, 1010	Aggregate Source for Roadway	OPSS 1010 Table 1, Table 2 for specific aggregate being used	Submission of material source testing of all physical properties once per season or if extraction location within the source changes	Source identifiers i.e. name, pit/quarry location
	Aggregate Source for Asphalt	Table 1, 5	Submission of material source testing of all physical properties once per season or if extraction location within the source changes	Source identifiers i.e. name, pit/quarry location
	Aggregate Source for Concrete	OPSS 1002 Table 1, 2, 3, 4, 5 for specific aggregate being used	Submission of material source testing of all physical properties once per season or if extraction location within the source changes	Source identifiers i.e. name, pit/quarry location
	Roadway	Compaction	Min. every 15 m a Z@ Pattern 100% (501.08.02)	Street, Station, offset i.e. Street A, 0 + 105, 3.5 m LT
	Roadway	Moisture Content	Min. every 15 m a Z pattern	Street, Station, offset ie: Street A, 0 + 105, 3.5 m LT
	Roadway	Gradation Percent Crushed PN# (site specific)	- Granulars are to be sampled at source and gradation checked prior to delivery AND - min. 1 check per 100 m of road for an 8.5 m road - gradation to conform to OPSS 1010	Street, Station, offset ie: Street A, 0 + 105, 3.5 m LT

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**K3
REVISED JANUARY 2011**

<u>MATERIAL</u>	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
Granular Materials OPSS 1001, 1002, 1003, 1004, 1010	Driveway	Compaction and Contamination	33% of Driveways at random, 100% (510.08.02) Check to ensure there is 150mm of un- contaminated material	Lot or house #, distance from curb or garage
	Curb-line Bedding	Compaction	Every 15 m, 100% (501.08.02)	Street, Station Lt or Rt or North, South, East, West
Asphalt HL3 & HL8 OPSS 1101, 1103, 1150	Roadway	Compaction	15 m each lane 92 to 96.5% (Table 9 OPSS 310) (MRD) 97% min using Nuclear Gauge	Street, Station, Lt or Rt or North, South, East, West or adjacent lot i.e. Street A, 0 + 225, South lane
	Roadway	Sampling	every 150 m each lane (every 100 m on industrial roads)	As Above
	Roadway	Asphalt Temperature	every 150 m each lane, 120° C to 165° C (310.07.02.07, 1150.05.02.01) with sample	As Above
	Roadway	Ambient Temperature	Each Sample min. + 2° C for HL8 /Base Asphalt min. + 7° C for HL3/subsequent lifts and/or top lift	As Above
	Roadway	Marshall Tests	Table 8 OPSS 310 2 per day of paving from samples taken	As Above
	Roadway	Extraction Tests (1150.07.03)	Table 7 OPSS 310 2 per day of paving from samples taken	As Above

<u>MATERIAL</u>	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
Asphalt HL3,HL3a, HL8	Driveway	Marshall Tests	Table 8 OPSS 310 2 per day of paving	Lot or house #, distance from curb or garage
	Driveway	Extraction Tests	2 per day of paving	As Above
	Driveway	Temperature	115° C to 165° C, with Samples	As Above
	Driveway	Compaction	96% (310.07.02.11.01) 97% min using Nuclear Gauge	As Above
All Asphalt Test results are to correspond to all OPSS Standards, ie 1003, 1101, 1150 (AADT > 5000).				
If there are failures, further testing will be done on the samples to determine the limits of the failures.				
Corrective action will depend on nature and extent of failures.				
Concrete (OPSS 1350)	Sidewalk	Compressive Strength	- 3 location per 500 m of sidewalk - min 3 cylinders per location for 7 & 28 day breaks 30 MPA (OPSS 351)	Station, Lt. or Rt. or adjacent lot or house number
	Sidewalk	Slump	First 3 trucks or until consistent, at sampling & every 3 rd truck 70mm +/- 20mm (OPSS 351)	As Above
	Sidewalk	Air Content	First 3 trucks or until consistent, at sampling & every 3 rd truck 7% +/- 1.5% (OPSS 351)	As Above
	Sidewalks	Temperature	First 3 trucks and every 3 rd truck after and with samples 10°-28° C (OPSS 1350.05.05)	As Above

<u>MATERIAL</u>	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
	Sidewalks	Ambient Temperature	High and low temps	
	Sidewalks	Discharge Time	First 3 trucks and every 3 rd truck after and with samples All concrete shall be discharged within 1.5hours of batching if < 28°C, 1.0 if >28°C	As Above
	Curb and Gutter	Compressive Strength	- 3 locations per 500m of Curbing - min. 3 cylinders per location for 7 & 28 day breaks Min 30 MPA (OPSS 353)	As Above
	Curb and Gutter	Slump	First 3 trucks or until consistent, at sampling & every sample location Max 60 mm (OPSS 353)	As Above
	Curb and Gutter	Air Content	First 3 trucks or until consistent, at sampling & every sample location 7% +/- 1.5% (OPSS 353)	As Above
	Curb and Gutter	Temperature	First 3 trucks and every 3 rd truck after and with samples 10°-28° C (OPSS 1350.05.05)	As Above
		Ambient Temperature	Protection	

<u>MATERIAL</u>	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
	Curb and Gutter	Discharge Time	First 3 trucks and every 3 rd truck after and with samples All concrete shall be discharged within 1.5hours of batching if < 28°C, 1.0 if >28°C	As Above
	Structures	Compressive Strength	2 sets (3 samples ea) per pour 30 MPA min or as specified by designer	As Above
Concrete (OPSS 1350)	Structures	Slump	First 3 trucks and every 3 rd truck after and with samples 30mm (OPSS 904) or as specified by designer	As Above
	Structures	Air Content	First 3 trucks and every 3 rd truck after and with samples 7% (OPSS 904)	As Above
	Structures	Temperature	First 3 trucks and every 3 rd truck after and with samples 10°-28° C (OPSS 1350.05.05)	As Above
		Ambient Temperature	Protection	
	Structures	Discharge Time	First 3 trucks and every 3 rd truck after and with samples All concrete shall be discharged within 1.5hours of batching if < 28°C, 1.0 if >28°C	As Above

Notes:

- 1) Additional Testing may be required by the Manager of Engineering depending upon site conditions.
- 2) Results of compaction tests for sewer trenches will be plotted on a plan/profile drawing at the site in addition to being submitted to the Manager of Engineering in a Tabular Form.
- 3) Subgrade will be proof rolled in the presence of the Developers Engineer and Soils Consultant. The Soils Engineer shall issue a certificate of compaction and approval prior to the placement of granular materials, stating that the trenches, services and road subgrade have been backfilled, compacted and tested in accordance with the Towns testing criteria and is suitable for the placement of granular materials.
- 4) The Soils Engineer shall issue a certificate of compaction and approval of granular materials prior to the placement of Hot Mix Asphalt.