

# **APPENDIX 'A'**

# **GEOTECHNICAL REPORT**

## **APPENDIX 'A' - GEOTECHNICAL REPORT**

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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.

## Geotechnical Report for Waverley West Arterial Roads Project Part 3 – Contract 4

### Test Hole Locations



## Summary of Core Samples



### KENASTON BLVD SOUTH EXTENSION GEOTECHNICAL INVESTIGATION

| Testhole no. | Sample Depth (m) | Soil Type | Sample Description                             | Moisture Content (%) | Particle Size Analysis      |                               |                                |                       | Atterberg Limits |               |                  |
|--------------|------------------|-----------|--|----------------------|-----------------------------|-------------------------------|--------------------------------|-----------------------|------------------|---------------|------------------|
|              |                  |           |  |                      | Gravel (%)<br>75 to 4.75 mm | Sand (%)<br><4.75 to 0.075 mm | Silt (%)<br><0.075 to 0.005 mm | Clay (%)<br><0.005 mm | Liquid Limit     | Plastic Limit | Plasticity Index |
| TH13         | 0.6              | Silt      | tan, compact, moist, low plasticity, some clay | 22                   | 0                           | 0.8                           | 60.4                           | 38.8                  | 37               | 16            | 21               |
| TH21         | 0.9              | Clay      | grey, stiff, moist, high plasticity            | 29                   | 0                           | 0.4                           | 14.1                           | 85.5                  | 94               | 32            | 62               |
| TH27         | 0.6              | Silt      | tan, compact, moist, low plasticity            | 17                   | 0                           | 9.7                           | 66.6                           | 23.7                  | 25               | 16            | 9                |
| TH33         | 0.9              | Clay      | grey, stiff, moist, high plasticity            | 24                   | 0                           | 1.5                           | 17.5                           | 81.0                  | 83               | 28            | 55               |
| TH39         | 0.6              | Clay      | grey, stiff, moist, high plasticity            | 28                   | 0                           | 1.6                           | 20.2                           | 78.2                  | 87               | 24            | 63               |

Test Hole Log for 30

| TESTHOLE TH30   |        |  |  |                     |
|---|--------|--|---|---------------------|
| Project Name: Kenaston Blvd South Extension<br>Project Location: Winnipeg, Manitoba<br>Client: Stantec<br>Drilling Contractor: Active Drilling and Piling<br>Drilling Method: 125 mm Solid Stem Auger<br>UTM Coordinates: 14U 630699 m E, 5514855 m N |        | Date Drilled: October 12, 2012<br>Depth of Testhole: 3.0 m<br>Logged by: Trevor Schellenberg<br>Reviewed by: Aron Piamsajee  |   |                     |
| Depth (m)   | Symbol | Description  | Sample Type   | ● Water Content (%) |
|   |        |  |   | 25 50 75 100        |
|   |        | <b>Topsoil</b>   |   |                     |
|   |        | <b>Clay</b><br>- grey, stiff, moist, high plasticity<br>- trace organic material to 0,3 m  | BS  | ● 22                |
|   |        |  | BS  | ● 21                |
|   |        |  | BS  | ● 25                |
| 1.0   |        | <b>Silt</b><br>- tan, firm, moist, low plasticity  | BS  | ● 15                |
|   |        | <b>Clay</b><br>- grey, stiff, moist, high plasticity   | BS  | ● 38                |
|   |        |  | BS  | ● 35                |
| 2.0   |        |  | BS  | ● 36                |
|   |        |  | BS  | ● 36                |
|   |        |  | BS  | ● 47                |
| 3.0   |        |  | BS  | ● 50                |
|   |        | <ul style="list-style-type: none"> <li>• No groundwater seepage or soil sloughing was observed during or upon completion of drilling.</li> <li>• Testhole terminated at a depth of 3.0 m.</li> </ul> |   |                     |

Test Hole Log for 31

| TESTHOLE TH31   |        |  |  |                     |    |    |     |
|---|--------|--|---|---------------------|----|----|-----|
| <b>Project Name:</b> Kenaston Blvd South Extension<br><b>Project Location:</b> Winnipeg, Manitoba<br><b>Client:</b> Stantec<br><b>Drilling Contractor:</b> Active Drilling and Piling<br><b>Drilling Method:</b> 125 mm Solid Stem Auger<br><b>UTM Coordinates:</b> 14U 630780 m E, 5514726 m N |        | <b>Date Drilled:</b> October 12, 2012<br><b>Depth of Testhole:</b> 3.0 m<br><b>Logged by:</b> Trevor Schellenberg<br><b>Reviewed by:</b> Aron Piamsajee  |   |                     |    |    |     |
| Depth (m)   | Symbol | Description  | Sample Type   | ● Water Content (%) |    |    |     |
|   |        |  |   | 25                  | 50 | 75 | 100 |
| 0.0 - 0.1   |        | <b>Topsoil</b>   |   |                     |    |    |     |
| 0.1 - 1.0   |        | <b>Clay</b><br>- black, stiff, moist, high plasticity<br>- trace organic material to 0,3 m<br>- grey below 0.6 m   | BS  | 33                  |    |    |     |
|   |        |  | BS  | 30                  |    |    |     |
|   |        |  | BS  | 21                  |    |    |     |
| 1.0 - 2.0   |        | <b>Silt</b><br>- tan, firm, moist, low plasticity  | BS  | 18                  |    |    |     |
|   |        |  | BS  | 10                  |    |    |     |
|   |        |  | BS  | 17                  |    |    |     |
| 2.0 - 3.0   |        | <b>Clay</b><br>- grey, stiff, moist, high plasticity   | BS  | 19                  |    |    |     |
|   |        |  | BS  | 35                  |    |    |     |
|   |        |  | BS  | 34                  |    |    |     |
|   |        |  | BS  | 15                  |    |    |     |
|   |        | <ul style="list-style-type: none"> <li>No groundwater seepage or soil sloughing was observed during or upon completion of drilling,</li> <li>Testhole terminated at a depth of 3.0 m.</li> </ul> |   |                     |    |    |     |

**Test Hole Log for 32**

