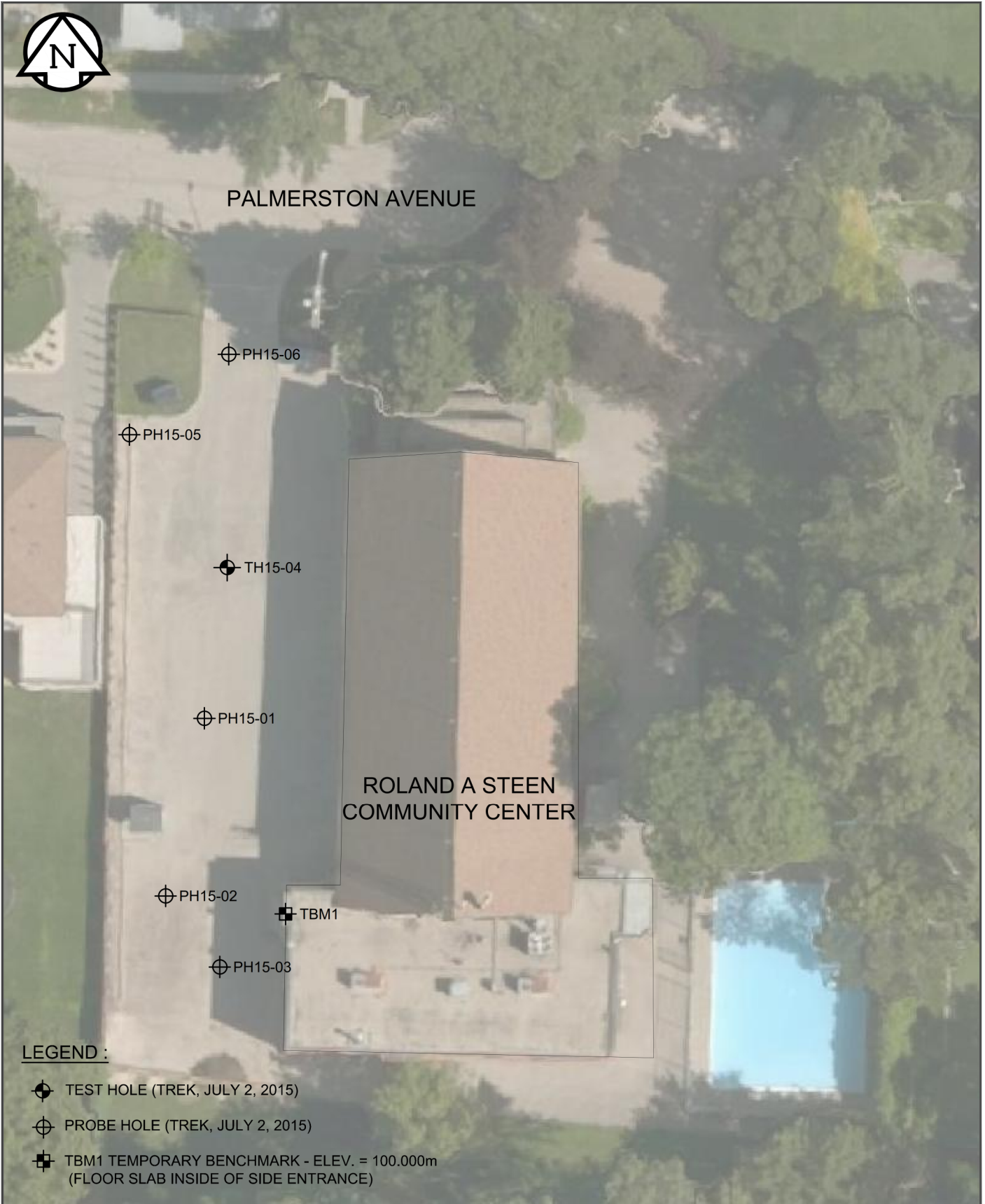


8 1/2" x 11"

PLOT: 7/28/2015 12:46:35 PM

FILE NAME: FIG 001 2015-07-28 Site Plan 0\_C\_HA 0157 001 00.dwg

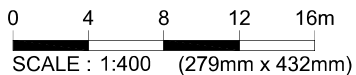


**LEGEND :**

- ⊕ TEST HOLE (TREK, JULY 2, 2015)
- ⊕ PROBE HOLE (TREK, JULY 2, 2015)
- ⊕ TBM1 TEMPORARY BENCHMARK - ELEV. = 100.000m  
(FLOOR SLAB INSIDE OF SIDE ENTRANCE)

**NOTES :**

1. AERIAL IMAGE FROM BING MAPS.



**Figure 01**  
Site Plan



# Sub-Surface Log

Probe Hole PH15-01

1 of 1

**Client:** Sison Blackburn Consulting **Project Number:** 0157 001 00  
**Project Name:** RA Steen Memorial Parking Lot **Location:** UTM N-5526556.984, E-631230.7508  
**Contractor:** TREK Geotechnical **Ground Elevation:** 99.74 m  
**Method:** 50 mm Hand Auger **Date Drilled:** July 2, 2015

**Sample Type:**  Grab (G)  Shelby Tube (T)  Split Spoon (SS)  Split Barrel (SB)  Core (C)

**Particle Size Legend:** Fines Clay Silt Sand Gravel Cobbles Boulders

| Elevation (m) | Depth (m) | Soil Symbol | MATERIAL DESCRIPTION  | Sample Type | Sample Number | Bulk Unit Wt (kN/m <sup>3</sup> )                      |    |    |    |    | Undrained Shear Strength (kPa) |           |    |     |     |     |     |
|---------------|-----------|-------------|---|-------------|---------------|--|----|----|----|----|--------------------------------|-----------|----|-----|-----|-----|-----|
|               |           |             |   |             |               | 16   | 17 | 18 | 19 | 20 | 21                             | Test Type |    |     |     |     |     |
|               |           |             |   |             |               | Particle Size (%)                                      |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0  | 20 | 40 | 60 | 80 | 100                            |           |    |     |     |     |     |
|               |           |             |   |             |               | PL ——— MC ——— LL ———<br> ----- ----- ----- ----- ----- |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0  | 20 | 40 | 60 | 80 | 100                            | 0         | 50 | 100 | 150 | 200 | 250 |
| 99.7          |           |             | ASPHALT - ~50 mm thick  |             | C01           |  |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             | CLAY AND GRAVEL (FILL) - some sand, trace silt, poorly graded, fine sand and fine gravel<br>- brown<br>- moist                          |             | G02           | ●  |    |    |    |    |                                |           |    |     |     |     |     |
| 99.6          |           |             | CLAY (FILL) - silty, trace sand, trace gravel, trace organics<br>- black<br>- moist, firm to stiff<br>- intermediate to high plasticity |             | G03           | ●  |    |    |    |    |                                |           |    |     |     |     |     |
| 99.5          |           |             | ORGANIC SILT AND CLAY (FILL) - trace sand<br>- black<br>- moist<br>- high plasticity  |             | G04           | ●  |    |    |    |    |                                |           |    |     |     |     |     |
| 99.4          |           |             |   |             |               |  |    |    |    |    |                                |           |    |     |     |     |     |

END OF TEST HOLE AT 0.3 m IN CLAY FILL  
 Notes:  
 1. No seepage or sloughing observed.  
 2. Test hole open to 0.3 m after drilling.  
 3. Test hole backfilled with auger cuttings and topped with 50 mm cold mix asphalt.

SUB-SURFACE LOG LOGS 2015-07-20 RA STEEN - 0157 001 00 - REVA\_IN.GPJ TREK GEOTECHNICAL.GDT 7/29/15

**Logged By:** Paul Bevel **Reviewed By:** Brent Hay **Project Engineer:** Brent Hay



# Sub-Surface Log

Probe Hole PH15-02

1 of 1

**Client:** Sison Blackburn Consulting **Project Number:** 0157 001 00  
**Project Name:** RA Steen Memorial Parking Lot **Location:** UTM N-5526543.527, E-631227.8157  
**Contractor:** TREK Geotechnical **Ground Elevation:** 99.60 m  
**Method:** 50 mm Hand Auger **Date Drilled:** July 2, 2015

**Sample Type:**  Grab (G)  Shelby Tube (T)  Split Spoon (SS)  Split Barrel (SB)  Core (C)

**Particle Size Legend:**  Fines  Clay  Silt  Sand  Gravel  Cobbles  Boulders

| Elevation (m) | Depth (m) | Soil Symbol | MATERIAL DESCRIPTION  | Sample Type | Sample Number | Bulk Unit Wt (kN/m <sup>3</sup> )      |    |    |    |    | Undrained Shear Strength (kPa) |           |    |     |     |     |     |
|---------------|-----------|-------------|---|-------------|---------------|--|----|----|----|----|--------------------------------|-----------|----|-----|-----|-----|-----|
|               |           |             |   |             |               | 16                                     | 17 | 18 | 19 | 20 | 21                             | Test Type |    |     |     |     |     |
|               |           |             |   |             |               | Particle Size (%)                      |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0                                      | 20 | 40 | 60 | 80 | 100                            |           |    |     |     |     |     |
|               |           |             |   |             |               | PL ——— MC ——— LL<br> ————— ————— ————— |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0                                      | 20 | 40 | 60 | 80 | 100                            | 0         | 50 | 100 | 150 | 200 | 250 |
| 99.5          |           |             | ASPHALT - ~65 mm thick  |             | C05           |  |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             | SAND AND GRAVEL (FILL) - trace fines<br>- light brown<br>- dry to moist, 25 mm down crushed limestone, well graded, fine sand to coarse gravel, angular |             | G06           |  |    |    |    |    |                                |           |    |     |     |     |     |
| 99.3          |           |             | CLAY (FILL) - silty, trace to some sand, trace gravel, trace organics<br>- brown and black<br>- moist, stiff<br>- high plasticity                       |             | G07A          |  |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             | G07B          |  |    |    |    |    |                                |           |    |     |     |     |     |
| -0.5          |           |             |   |             |               |  |    |    |    |    |                                |           |    |     |     |     |     |
| 99.0          |           |             |   |             |               |  |    |    |    |    |                                |           |    |     |     |     |     |

END OF TEST HOLE AT 0.5 m IN CLAY FILL  
 NOTES:  
 1. No seepage or sloughing observed.  
 2. Test hole open to 0.5 m after drilling.  
 3. Test hole backfilled with auger cuttings and topped with 50 mm cold mix asphalt.

SUB-SURFACE LOG LOGS 2015-07-20 RA STEEN - 0157 001 00 - REVA\_IN.GPJ TREK GEOTECHNICAL.GDT 7/29/15

**Logged By:** Paul Bevel **Reviewed By:** Brent Hay **Project Engineer:** Brent Hay



# Sub-Surface Log

Probe Hole PH15-03

1 of 1

**Client:** Sison Blackburn Consulting **Project Number:** 0157 001 00  
**Project Name:** RA Steen Memorial Parking Lot **Location:** UTM N-5526538.16, E-631231.9066  
**Contractor:** TREK Geotechnical **Ground Elevation:** 99.61 m  
**Method:** 50 mm Hand Auger **Date Drilled:** July 2, 2015

**Sample Type:**  Grab (G)  Shelby Tube (T)  Split Spoon (SS)  Split Barrel (SB)  Core (C)

**Particle Size Legend:** Fines Clay Silt Sand Gravel Cobbles Boulders

| Elevation (m) | Depth (m) | Soil Symbol | MATERIAL DESCRIPTION  | Sample Type | Sample Number | Bulk Unit Wt (kN/m <sup>3</sup> )                      |    |    |    |    | Undrained Shear Strength (kPa) |           |    |     |     |     |     |
|---------------|-----------|-------------|---|-------------|---------------|--|----|----|----|----|--------------------------------|-----------|----|-----|-----|-----|-----|
|               |           |             |   |             |               | 16   | 17 | 18 | 19 | 20 | 21                             | Test Type |    |     |     |     |     |
|               |           |             |   |             |               | Particle Size (%)                                      |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0  | 20 | 40 | 60 | 80 | 100                            |           |    |     |     |     |     |
|               |           |             |   |             |               | PL ——— MC ——— LL ———<br> ----- ----- ----- ----- ----- |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0  | 20 | 40 | 60 | 80 | 100                            | 0         | 50 | 100 | 150 | 200 | 250 |
| 99.6          |           |             | ASPHALT - ~50 mm thick  |             | C08           |  |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             | SAND AND GRAVEL (FILL) - trace fines<br>- brown<br>- dry to moist, 25 mm down crushed limestone, well graded, fine sand to coarse gravel, angular                                     |             | G09           |  |    |    |    |    |                                |           |    |     |     |     |     |
| 99.4          |           |             | CLAY (FILL) - silty, trace sand, trace gravel, trace organics, trace oxidation<br>- brown and black<br>- moist, firm<br>- high plasticity<br><br>- silt inclusions, stiff below 0.3 m |             | G10           |  |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             | G11           |  |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             | G12           |  |    |    |    |    |                                |           |    |     |     |     |     |
| 99.1          | 0.5       |             |   |             |               |  |    |    |    |    |                                |           |    |     |     |     |     |

END OF TEST HOLE AT 0.5 m IN CLAY FILL  
 NOTES:  
 1. No seepage or sloughing observed.  
 2. Test hole open to 0.5 m after drilling.  
 3. Test hole backfilled with auger cuttings and topped with 50 mm cold mix asphalt.

SUB-SURFACE LOG LOGS 2015-07-20 RA STEEN - 0157 001 00 - REVA\_IN.GPJ TREK GEOTECHNICAL.GDT 7/29/15

**Logged By:** Paul Bevel **Reviewed By:** Brent Hay **Project Engineer:** Brent Hay



# Sub-Surface Log

Test Hole TH15-04

1 of 1

Client: Sison Blackburn Consulting Project Number: 0157 001 00  
 Project Name: RA Steen Memorial Parking Lot Location: UTM N-5526568.353, E-631232.4764  
 Contractor: TREK Geotechnical Ground Elevation: 99.98 m  
 Method: 50 mm Hand Auger Date Drilled: July 2, 2015

Sample Type:  Grab (G)  Shelby Tube (T)  Split Spoon (SS)  Split Barrel (SB)  Core (C)

Particle Size Legend:  Fines  Clay  Silt  Sand  Gravel  Cobbles  Boulders

| Elevation (m) | Depth (m) | Soil Symbol | MATERIAL DESCRIPTION   | Sample Type | Sample Number | Bulk Unit Wt (kN/m <sup>3</sup> ) |    |    |    |    | Undrained Shear Strength (kPa) |    |
|---------------|-----------|-------------|--|-------------|---------------|-----------------------------------|----|----|----|----|--------------------------------|----|
|               |           |             |  |             |               | 16                                | 17 | 18 | 19 | 20 |                                | 21 |
| 99.9          |           |             | ASPHALT - ~45 mm thick   |             | C13           |                                   |    |    |    |    |                                |    |
| 99.8          |           |             | SAND AND GRAVEL (FILL) - some clay, trace silt<br>- dark brown to black, moist, well graded fine sand to coarse gravel |             | G14           |                                   |    |    |    |    |                                |    |
| 99.7          |           |             | ORGANIC SILT AND CLAY - trace sand, trace gravel, black, moist, firm, high plasticity                                  |             | G15           |                                   |    |    |    |    |                                |    |
|               | 0.5       |             | CLAY AND SILT (FILL) - sandy, trace gravel<br>- brown and black<br>- moist, stiff<br>- intermediate plasticity         |             | G16           |                                   |    |    |    |    |                                |    |
|               |           |             |  |             | G17           |                                   |    |    |    |    |                                |    |
|               | 1.0       |             |  |             | G18           |                                   |    |    |    |    |                                |    |
| 98.8          |           |             | SILT AND CLAY - trace sand, trace gravel<br>- brown<br>- moist, stiff<br>- intermediate plasticity                     |             | G19           |                                   |    |    |    |    |                                |    |
|               | 1.5       |             |  |             | G20           |                                   |    |    |    |    |                                |    |
|               |           |             |  |             | G21           |                                   |    |    |    |    |                                |    |
|               | 2.0       |             |  |             | G22           |                                   |    |    |    |    |                                |    |
|               | 2.3       |             |  |             |               |                                   |    |    |    |    |                                |    |

END OF TEST HOLE AT 2.3 m IN SILT AND CLAY  
 NOTES:  
 1. No seepage or sloughing observed.  
 2. Test hole open to 2.3 m after drilling.  
 3. Test hole backfilled with auger cuttings and topped with 50 mm cold mix asphalt.

SUB-SURFACE LOG LOGS 2015-07-20 RA STEEN - 0157 001 00 - REVA\_IN.GPJ TREK GEOTECHNICAL.GDT 7/29/15

Logged By: Paul Bevel Reviewed By: Brent Hay Project Engineer: Brent Hay



# Sub-Surface Log

Probe Hole PH15-05

1 of 1

**Client:** Sison Blackburn Consulting **Project Number:** 0157 001 00  
**Project Name:** RA Steen Memorial Parking Lot **Location:** UTM N-5526578.375, E-631225.0737  
**Contractor:** TREK Geotechnical **Ground Elevation:** 99.94 m  
**Method:** 50 mm Hand Auger **Date Drilled:** July 2, 2015

**Sample Type:**  Grab (G)  Shelby Tube (T)  Split Spoon (SS)  Split Barrel (SB)  Core (C)

**Particle Size Legend:** Fines Clay Silt Sand Gravel Cobbles Boulders

| Elevation (m) | Depth (m) | Soil Symbol | MATERIAL DESCRIPTION  | Sample Type | Sample Number | Bulk Unit Wt (kN/m <sup>3</sup> )    |    |    |    |    | Undrained Shear Strength (kPa) |           |    |     |     |     |     |
|---------------|-----------|-------------|---|-------------|---------------|--------------------------------------|----|----|----|----|--------------------------------|-----------|----|-----|-----|-----|-----|
|               |           |             |   |             |               | 16                                   | 17 | 18 | 19 | 20 | 21                             | Test Type |    |     |     |     |     |
|               |           |             |   |             |               | Particle Size (%)                    |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0                                    | 20 | 40 | 60 | 80 | 100                            |           |    |     |     |     |     |
|               |           |             |   |             |               | PL ——— MC ——— LL ———<br> -----●----- |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             |               | 0                                    | 20 | 40 | 60 | 80 | 100                            | 0         | 50 | 100 | 150 | 200 | 250 |
| 99.9          |           |             | ASPHALT - ~65 mm thick  |             | C23           |                                      |    |    |    |    |                                |           |    |     |     |     |     |
| 99.8          |           |             | SAND AND GRAVEL (FILL) - trace fines<br>- light brown<br>- moist, 25 mm down crushed limestone, well graded, fine sand to coarse gravel, angular to sub-angular |             | G24           | ●                                    |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |   |             | G25           | ●                                    |    |    |    |    |                                |           |    |     |     |     |     |

END OF TEST HOLE AT 0.2 m IN CRUSHED LIMESTONE FILL  
 NOTES:  
 1. No seepage or sloughing observed.  
 2. Test hole open to 0.2 m after drilling.  
 3. Test hole backfilled with auger cuttings and topped with 50 mm cold mix asphalt.

**Logged By:** Paul Bevel **Reviewed By:** Brent Hay **Project Engineer:** Brent Hay

SUB-SURFACE LOG LOGS 2015-07-20 RA STEEN - 0157 001 00 - REVA\_JN.GPJ TREK GEOTECHNICAL.GDT 7/29/15



# Sub-Surface Log

Probe Hole PH15-06

1 of 1

**Client:** Sison Blackburn Consulting **Project Number:** 0157 001 00  
**Project Name:** RA Steen Memorial Parking Lot **Location:** UTM N-5526584.479, E-631232.5958  
**Contractor:** TREK Geotechnical **Ground Elevation:** 100.09 m  
**Method:** 50 mm Hand Auger **Date Drilled:** July 2, 2015

**Sample Type:**  Grab (G)  Shelby Tube (T)  Split Spoon (SS)  Split Barrel (SB)  Core (C)

**Particle Size Legend:** Fines Clay Silt Sand Gravel Cobbles Boulders

| Elevation (m) | Depth (m) | Soil Symbol | MATERIAL DESCRIPTION   | Sample Type | Sample Number | Bulk Unit Wt (kN/m <sup>3</sup> )   |    |    |    |    | Undrained Shear Strength (kPa) |           |    |     |     |     |     |
|---------------|-----------|-------------|--|-------------|---------------|---|----|----|----|----|--------------------------------|-----------|----|-----|-----|-----|-----|
|               |           |             |  |             |               | 16  | 17 | 18 | 19 | 20 | 21                             | Test Type |    |     |     |     |     |
|               |           |             |  |             |               | Particle Size (%)   |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |  |             |               | 0   | 20 | 40 | 60 | 80 | 100                            |           |    |     |     |     |     |
|               |           |             |  |             |               | PL ——— MC ——— LL<br> -----●----- <br>0 20 40 60 80 100 0 50 100 150 200 250 |    |    |    |    |                                |           |    |     |     |     |     |
|               |           |             |  |             |               | 0   | 20 | 40 | 60 | 80 | 100                            | 0         | 50 | 100 | 150 | 200 | 250 |
| 100.0         |           |             | ASPHALT - ~65 mm thick   |             | C26           |   |    |    |    |    |                                |           |    |     |     |     |     |
| 100.0         |           |             | SAND AND GRAVEL (FILL) - trace fines<br>- light brown<br>- dry to moist, 25 mm down crushed limestone, well graded, fine sand to coarse gravel, angular to sub-angular |             | G27           | ●   |    |    |    |    |                                |           |    |     |     |     |     |

END OF TEST HOLE AT 0.1 m IN CRUSHED LIMESTONE FILL  
 NOTES:  
 1. No seepage or sloughing observed.  
 2. Test hole open to 0.1 m after drilling.  
 3. Test hole backfilled with auger cuttings and topped with 50 mm cold mix asphalt.

SUB-SURFACE LOG LOGS 2015-07-20 RA STEEN - 0157 001 00 - REVA\_JN.GPJ TREK GEOTECHNICAL.GDT 7/29/15

**Logged By:** Paul Bevel **Reviewed By:** Brent Hay **Project Engineer:** Brent Hay



Photo 1: Asphalt Core Sample and underlying granular fill from Probe Hole PH15-01



Photo 2: Asphalt Core Sample and underlying granular fill from Probe Hole PH15-02





Photo 3: Asphalt Core Sample and underlying granular fill from Probe Hole PH15-03



Photo 4: Asphalt Core Sample and underlying granular fill from Test Hole TH15-04



Photo 5: Asphalt Core Sample and underlying granular fill from Probe Hole PH15-05



Photo 6: Asphalt Core Sample and underlying granular fill from Probe Hole PH15-06