

Functional Servicing and Stormwater Management Report

**LM Barrie & Blue Sky Development
1597229 and 2121191 Ontario Inc.**

City of Barrie

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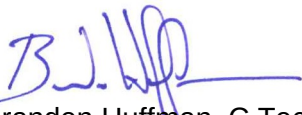
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Disclaimer

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1.0 Introduction and Background

R.J. Burnside and Associates Limited (Burnside) has been retained by LM Barrie Holdings Inc. and 2121191 Ontario Inc. (collectively LM Barrie, to be referred to herein as LMB) and 1597229 Ontario Limited (Blue Sky Developments, to be referred to as BSD) to prepare a Functional Servicing Report (FSR) in support of the proposed LM Barrie and Blue Sky Development in the Hewitt's Creek Secondary Plan Area (SPA) in the City of Barrie. The BSD consists of two properties, namely BSD North (BSDN) and BSD East (BSDE). These properties are shown on Figure 01 (Location and Boundary Plan). This Report will ultimately support the application for three Draft Plans of Subdivision (initially LM Barrie, BSDN, and a portion of BSDE in Phase 1, and eventually for the balance of BSDE lands within Phase 3, which will require that at minimum, 60% of all of Phase 1 and Phase 2 lands are draft plan approved). This Report will demonstrate that the subject lands can be provided with municipal servicing and Stormwater Management Facilities (SWMF) in accordance with all applicable regulatory requirements and design criteria.

Within this Report, the LMB lands and all the BSD lands were considered as one site for design purposes. However, a few sections of the Report can be noted as specifically pertaining to either the LMB or BSD lands.

LMB – Sections 3.1.1 and 3.1.7.1 discuss Catchment 11B which is fully within the LMB lands.

BSD – Sections 3.1.4 and 3.1.7.4, Figure 12, and Appendix H pertain to SWMF 16 and the catchments draining to it, which are all fully within the BSD lands.

All other sections of the Report, Appendices and Figures discuss portions of the site that fall within LMB and BSD lands.

1.1 Site Description and Context

The subject lands comprise a total of 120.76 ha, of which 93.71 ha is developable. 88.16 ha are within the Hewitt's Secondary Plan Area (SPA) Phase 1 lands, 12.7 ha within the Hewitt's SPA Phase 3, and 19.90 ha are in the post-2031 lands. The post-2031 lands are not within the Hewitt's SPA. Only the properties within the 2031-line (Hewitt's SPA Phases 1 and 3) are subject to applications for Draft Plan Approval. The subject land is located between Big Bay Point Road to the north, Maplevue Drive East to the south, 20th Sideroad and future (post-2031) development to the east, and existing residential (Maplecourt, Hamptons on Big Bay Point Developments) to the west.

Part of the proposed storm servicing will be through the use of a SWM Facility located in the post-2031 portion of BSDE. Please refer to Figure 01, which shows the property in context with the surrounding area.

The Ontario Municipal Board (OMB) and City-approved Conformity Plan, prepared by The Jones Consulting Group Ltd. (Jones), dated September 27, 2016, includes 1,745 residential units, with a mix of low- and medium-density unit types, a 36 unit Apartment Block, and a Commercial Block. The plan provides for roadways, three stormwater management blocks (SWMF Nos. 14, 15 and 16), and the Natural Heritage System (NHS). Refer to Drawing A for the Conformity Plan. The current Draft Plans of Subdivision are included as Drawing B for LM Barrie and Drawing C for Blue Sky.

1.2 Background Studies and Documentation

The servicing concepts presented in this Report have been developed to comply with the infrastructure and stormwater management servicing framework that has been established via previous studies for the Hewitt's Creek SPA. The Hewitt's Secondary Plan (O.P.A. No. 39) was adopted by the City of Barrie on June 16, 2014.

The following background engineering studies and Reports inform the functional design:

- The information was compiled in six Master Plan Reports titled "City of Barrie, Secondary Plan, Background Studies and Infrastructure Master Plans Intensification and Annexed Lands" and include "Drainage and Stormwater Management," "Wastewater Collection," "Wastewater Treatment," and "Water Storage and Distribution," dated October 2013 (prepared by AMEC), as well as "Multi-Modal Active Transportation" and "Water Supply" (dated January 2014 and October 2013 respectively) which were both prepared by GENIVAR.
- "Hewitt's Secondary Plan Area Subwatershed Impact Study Lover's, Hewitt's and Sandy Cove Creeks" (Hewitt's SIS) for Hewitt's Annexed Lands, prepared by Burnside (dated September 2016).
- City of Barrie Draft Transportation Design Manual, July 11, 2016 and landowner response comments.
- Excerpts from the LM Barrie/Blue Sky Preliminary Geotechnical Investigation, Golder and Associates, December 2016.

The current Report has been prepared in accordance with, and in consideration of, the information and recommendations provided in the following documents:

- City of Barrie Engineering Standards, 2014.
- City of Barrie, Sanitary Sewer Collection System Policies and Design Guideline, October 2016.
- City of Barrie, Lot Grading and Drainage Standards and Design Manual (Draft), June 2016.
- City of Barrie, Storm Drainage and Stormwater Management Policies and Design Guidelines, November 2009.
- Stormwater Management Planning and Design Manual, Ministry of Environment (MOE), March 2003.
- LSRCA Technical Guidelines for Stormwater Management Submissions, June 2016.

A Preliminary Geotechnical Investigation has been prepared by Golder and Associates for the purpose of preparing this FSR, and can be found in Appendix A for reference. Borehole logs and Guelph Permeameter Results had been received in advance of the formal Report and were initially used as the basis for the SWM and infiltration facility designs outlined in this FSR, since verified upon receipt of the final Report. Geotechnical information used in this Report is from a combination of the preliminary Golder information, the final Geotechnical Report, and the Burnside Hydrogeological Study, undertaken as part of the Hewitt's SIS (see also Section 1.3 below).

Municipal services for this subdivision will be designed to comply with the latest standards and criteria required by the City of Barrie (roads, grading, water distribution and sanitary drainage, and storm drainage and stormwater management) and the Lake Simcoe Region Conservation Authority (stormwater management).

1.3 Existing Site Conditions

The overall LM Barrie and Blue Sky site is 120.76 ha, of which 104.92 ha is included within the scope of this Report. This includes Phase 1 lands (88.16 ha) and Phase 3 lands (12.74 ha). There are also a number of external areas which have been included as follows:

- 2.69 ha of external lands in the northwest corner of the site adjacent to Big Bay Point Road owned by others.
- 0.41 ha of external lands in the northeast corner of the site adjacent to Big Bay Point Road owned by others.
- 0.18 ha in the southeast portion of the site adjacent to Maplevue Drive owned by others.
- 0.74 ha along the south edge of the site adjacent to the north side of Maplevue Drive East, with 0.26 ha within Phase 1, and 0.48 ha within Phase 3 and owned by others.

The existing site (including the external parcels) is primarily agricultural land (row crops or hay) or forested land, located between Big Bay Point Road to the north, Maplevue Drive East to the south, 20th Sideroad and future (post-2031) development to the east, and existing residential (Maplecourt and Hamptons on Big Bay Point Developments) to the west.

The site straddles the subwatershed divide between Hewitt's Creek and Sandy Cove Creek. The lands within the Hewitt's Creek's side drain overland west towards the existing Maplecourt and Hamptons on Big Bay Point Developments. The lands within the Sandy Cove Creek subwatershed drain east or southeast towards a large existing NHS feature or the 20th Sideroad. Refer to Figure 02 for the Existing Conditions Drainage Plan.

The 2016 SIS Report discusses the soils on site at length in both the Hydrogeology Report (Sections 4.3.1 to 4.3.4) and again throughout the stormwater modelling sections, Low Impact Development (LID), Phosphorus (P) Budget and Water Balance Sections.

Figure 4 of the SIS indicates the site is predominantly gravelly sandy loams, loams with a pocket of sand in the northwest corner. The infiltration rates determined from these soil types (based largely on Hazen's Rule) ranged from 13.2 mm/hour to 235.6 mm/hour.

Additional geotechnical work was completed by Golder and Associates in 2016 including 42 boreholes and Guelph Permeameter tests in 10 locations. Please refer to Appendix A for the Golder Preliminary Geotechnical Investigation. Based on the 18 Guelph Permeameter tests in ten locations, Golder identified two distinct soil types:

Soil Type 3 – Structured soils from clay to loams; also includes unstructured medium-to-fine sands (TP4-TP10).

Soil Type 4 – Coarse and gravelly sands; may also include some highly-structured soils with large cracks and/or micropores (TP1-TP3).

Using the borehole data we identified the dominant soil type (defined as the least permeable layer of soil within 1.0 m of the surface) which shows the site to be composed of a core of Type 3 soils surrounded by Type 4 soils. In areas where there is pure sand (with only traces of silt) the infiltration rate is quite high. There are a significant number of boreholes which indicate thin layers of the permeable sand with less-permeable layers (silty clay).

We have updated the soils mapping prepared as part of the SIS (please see Figure 03) with the new information, which shows the soils types correlated to the dominant soil type within the first 1.0 m of the surface. Based on the Guelph Permeameter testing, in-situ infiltration rates were determined as follows:

- Sand = 178 mm/hour (average of six tests for TP1-TP3)
- Sandy Silt/Silty Sand/Silty Clay = 85 mm/hour (average of twelve tests for TP4-TP10)

For the purposes of the stormwater model and Green Ampt input parameters, the Type 3 soils would translate into a 'Clay Loam' and the Type 4 into a 'Sand'.

1.4 Hewitt's Creek System

The subject lands reside within both the Hewitt's Creek Subwatershed and the Sandy Cove Creek Subwatershed, each a tributary to Lake Simcoe. NHS limits and associated development buffers were defined in Section 3.0 of the Hewitt's SIS. Only the northeastern portion of the site (Catchment A1) has been defined as NHS. There are NHS lands designated as EP within Phase 1 of the Blue Sky Draft Plan, with the remaining NHS lands in the post-2031 portion of BSDE.

2.0 Existing Conditions Drainage

2.1 Pre-Development Stormwater Model

Sections 5.3.1.2 and 5.3.1.3, and 5.3.3.2 and 5.3.3.3 of the Hewitt's Secondary Plan Area Subwatershed Impact Study (SIS), September 2016, defined the existing catchment areas within Phase 1, Phase 3 and post-2031 lands for the LM Barrie/Blue Sky properties. Only minor alterations to the catchments have been undertaken for this Report, in particular, some areas delineated in the SIS have been reduced in size to eliminate areas which are outside Phase 1 and/or are not relevant to the current design. Please refer to Figure 02 for the existing condition catchment areas.

In keeping with the work completed for the SIS, a PCSWMM model was selected to determine the peak flows, as this represents the most effective method to test the performance of proposed LID measures on the subject site. The model was used to determine the pre-development flow rates from the site for the 2- through 100-year and Regional Storm Events.

Catchment soil parameters were selected based on preliminary borehole and Guelph Permeameter details provided by Golder and Associates as part of their Geotechnical Investigation (December 2016). The infiltration testing has indicated higher infiltration rates and slightly different soil types than what was used in the SIS Report, and consequently, the existing PCSWMM model provided as part of the SIS document needed to be updated.

Please see Appendix B for detailed pre-development catchment parameter calculations.

As discussed in Section 1.3 (above), areas within Type 4 soils have been classified as 'Sand' for the purposes of selected Green Ampt infiltration input parameters, and Type 3 soils have been classified as 'Clay Loam'.

Groundwater was noted for the study area in several locations. However, in general, the groundwater depths are such that they would not be a concern with respect to LID design or site servicing.

Additional PCSWMM input parameters have been selected based on City of Barrie standards, LSRCA guidelines, and/or the work completed as part of the SIS. This includes aquifer information for the continuous simulation model used for water balance calculations, which was obtained directly from the digital model included with the SIS document.

2.1.1 Hewitt's Creek Subcatchments

There are nine existing subcatchments contributing runoff to Hewitt's Creek within Phase 1 of the LM Barrie and Blue Sky Development. We use the same naming convention used in the SIS for ease of reference. The land use breakdown for these catchments was provided in Appendix D.2 in the SIS. The majority of the land is agricultural (row crops or hay) with smaller forested or transitional areas.

There are three general discharge areas on the west side of the site, Hamptons on Big Bay Point Development, Maplecort Development, and Mapleview Drive. Runoff from this portion of both Hamptons on Big Bay Point and Maplecort Developments discharge stormwater to a SWMF located at the southeast corner of Pepin Crescent and Prince William Way.

2.1.1.1 Discharge to Hamptons on Big Bay Point Development

39.13 ha of the existing Phase 1 lands within the proposed development drain west towards the existing Hamptons on Big Bay Point Development. Runoff is collected from Catchments 119, 120 and 121 in a series of rear yard catchbasins, as shown on the As-Constructed drawings in Appendix D.1 of the SIS.

Runoff from Catchment 119 is collected by catchbasin structures between Lots 381/382, 385/386, 388/389, 391/392, and 394/395. These rear yard structures are connected to the storm sewer on Versailles Crescent and account for 12.70 ha of unimproved land (C value of 0.2). The primary inlet was to be between Lots 385/386, with the secondary inlet between Lots 381/382. Upon review of the existing topographic information, the SIS identified a total of 13.87 ha of existing land contributing runoff to Versailles Crescent. No information has been made available regarding the peak flows previously calculated by the original design consultant, but the equivalent pre-development area and C value were available, and this information was incorporated into the SIS modelling. According to the SIS, the maximum capacity of the primary inlet (750 mm dia. pipe at 0.9%) is 1.1 m³/s.

Runoff from Catchment 120 is collected via a double catchbasin located at the southeast corner of Block 515 and extends out to Winchester Terrace. This structure accounted for 13.20 ha of unimproved land (C value of 0.2) however, as part of the SIS, this was increased to 18.44 ha based on updated topographic information. No information has been made available regarding the peak flows previously calculated by the original design consultant, but the equivalent pre-development area and C value were available, and this information was incorporated into the SIS modelling. According to the SIS, the maximum capacity of this inlet (675 mm dia. pipe at 1.9%) is 1.2 m³/s. The SIS indicated a slightly larger area of 18.53 ha, however a small portion of that modelled area sits outside the Phase 1 boundary.

Runoff from Catchment 121 is collected via a single catchbasin located at the south edge of the right-of-way (R.O.W.) on Winchester Terrace at the northeast corner of Lot 324 (Maplecort Development). This structure accounted for 12.85 ha of unimproved land and a 100-year peak flow of 1.08 m³/s. The SIS decreased the contributing area to 6.82 ha based on updated topographic information.

2.1.1.2 Discharge to Maplecort Development

7.52 ha of the existing Phase 1 lands within the proposed development drain west to the rear yards of the Maplecort Development. As-Constructed Drawings in Appendix D.1 of the SIS indicate several discharge points. The As-Constructed Drawings indicated 8.33 ha of contributing drainage area, however the SIS updated this area to 7.52 ha based on new topographic information.

Catchments 122 and 123 (2.81 ha) contribute runoff to rear yard catchbasins located between Lots 331/332 and 335/339, and connect to Regina Road.

Catchment 124 (1.80 ha) contributes runoff to a CBMH located at the east end of Unicorn Lane. It appears the intent of the designers was to utilize this structure/discharge location for the 100-year flow from 4.65 ha, or 0.396 m³/s of flow.

Catchments 125 and 126 (2.91 ha) contribute runoff to rear yard catchbasins located at the northern property line of Lot 180 and between Lots 178/179.

2.1.1.3 Discharge to Mapleview Drive

6.54 ha of the existing Phase 1 lands within the proposed development drain southwest to the north edge of the Mapleview Drive R.O.W. As-Constructed drawings in Appendix D.1 of the SIS indicate 7.10 ha of unimproved (C value of 0.3) contributing drainage area, however the SIS updated this area to 6.54 ha based on new topographic information.

2.1.2 Sandy Cove Creek Subcatchments

There are four catchments within the Sandy Cove Creek Watershed that lie within the LM Barrie/Blue Sky Development. The land use breakdown for these catchments was provided in Appendix D.2 of the SIS, and the majority of the land is agricultural (row crops or hay) with smaller forested or transitional areas.

Portions of the catchments are within Phase 1, Phase 3, and post-2031 development lands. Although this Report focuses primarily on Phase 1 lands, portions of Phase 3 and post-2031 lands also need to be discussed, as Phase 1 servicing will depend on these lands as an interim condition. Therefore, these lands are also discussed within the existing condition section.

2.1.2.1 Discharge to Big Bay Point Road/NHS Areas

Catchment 132 is 3.8 ha in size and is located on the south side of Big Bay Point Road, and runoff flows overland east into the NHS identified in the northeast corner of the Hewitt's SPA.

2.1.2.2 Discharge to 20th Sideroad and Mapleview Drive

Catchment 130 represents the largest portion of the development lands draining (ultimately) to Sandy Cove Creek. This catchment is 39.90 ha in the current model, however in the SIS it was slightly larger, representing additional area within the NHS limits which will not be collected from or directed to the future SWMF. The additional area has been included here as Catchment EXT (3.31 ha) and it will remain in the existing condition. Portions of Catchment 130 are in Phase 3 lands and will not be developed as part of this application. The runoff flows overland east through post-2031 lands (also owned by Blue Sky), to the northwest corner of 20th Sideroad and Mapleview Drive, where it flows under the 20th Sideroad via culvert, and then south under Mapleview Drive (again via culvert) into Sandy Cove Creek.

Catchment 131 represents what will be the SWMF Block under the post-development condition, and is currently shown as 4.285 ha, while in the SIS it was shown as 16.86 ha. The additional area that was in the SIS does not need to be discussed here as it is all post-2031 lands, will not be altered within Phase 1 development and will not be collected in the SWMF.

2.2 Pre-Development Runoff Results

The SIS Report pre-development model considered the 6 hour-SCS, 24 hour-SCS-II and 4 hour-CHIC Design Storms as per City of Barrie Stormwater Design Guide, and determined the 24 hour-SCS distribution was the Design Storm, as it generated both the highest peak flow and runoff volumes. The SIS unitary discharge rates found on Tables 7 and 8 have been updated to reflect the most current geotechnical information. Please refer to Tables 1 and 2 for a summary of the existing peak flow runoff and volumes, along with a summary of the SIS unitary discharge rates and the updated rates proposed as part of this FSR.

Table 1 Hewitt's Creek Subwatershed – Existing Condition Model Summary

Watershed	Catchment	Area (ha)	24 Hour SCS Type II Storm						Regional
			2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	
Hewitt's Creek									
	119	13.87	0.04	0.06	0.07	0.09	0.1	0.11	0.04
	120	18.43	0	0	0	0	0	0	0
	121	6.82	0	0	0	0	0	0	0
	122	2.21	0	0	0	0	0	0	0
	123	0.59	0	0	0	0	0	0	0
	124	1.80	0	0	0	0	0	0	0
	125	1.04	0	0	0	0	0	0	0
	126	1.87	0	0	0	0	0	0	0
	127	6.54	0.09	0.12	0.14	0.17	0.19	0.21	0.07
Total		53.17	0.13	0.18	0.21	0.26	0.29	0.32	0.11
Unitary discharge rate (m ³ /s/ha)			0.0024	0.0034	0.0039	0.0049	0.0055	0.0060	n/a
SIS Unitary Discharge Rates (m ³ /s/ha)			0.006	0.011	0.016	0.023	0.029	0.036	n/a
DSWMMP Unitary Discharge Rates (m ³			0.004	0.009	0.013	0.019	0.023	0.028	n/a

Table 2 Sandy Cove Creek Subwatershed – Existing Condition Model Summary

Watershed	Catchment	Area (ha)	24 Hour SCS Type II						Regional
			2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	
Sandy Cove									
	130	39.88	0.04	0.06	0.07	0.09	0.1	0.11	0.04
	EXT	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	131	4.28	0.01	0.01	0.02	0.02	0.02	0.03	0.01
	132	3.80	0.01	0.01	0.01	0.01	0.02	0.02	0.01
Total		47.96	0.06	0.08	0.1	0.12	0.14	0.16	0.06
Unitary discharge rate (m ³ /s/ha)			0.0013	0.0017	0.0021	0.0025	0.0029	0.0033	n/a
SIS Unitary Discharge Rates (m ³ /s/ha)			0.002	0.008	0.015	0.024	0.032	0.040	n/a
DSWMMP Unitary Discharge Rates (m ³			0.003	0.03	0.061	0.1	0.131	0.163	n/a

As seen in the above Tables, infiltration on the existing site results in minimal pre-development flows. Model results for the Hewitt's Creek area indicate that only Catchments 119 and 127 are generating runoff due to marginally siltier soils for these areas. The rates presented in Tables 1 and 2 are the required rates to which post-development discharge must match. Please refer to Appendix C for the PCSWMM Output Summary.

3.0 Proposed Stormwater Drainage

It is proposed to develop the existing site in multiple phases as per the Hewitt's Secondary Plan Master Plan. Phase 1 will develop 1,239 residential units, 13,375 m of fully-urban R.O.W., and several Neighbourhood Park Blocks. The portion of the site that is within Phase 3 of the Hewitt's SPA cannot proceed until 60% of the Phase 1 and 60% of the Phase 2 lands have Draft Plan Approval. Based on the current Conceptual Plan as presented in the SIS, Phase 3 would develop an additional 124 units, 1,541 m of R.O.W. and an elementary School Block. However, the Phase 3 lands are not currently part of the Draft Plan Approval. We have included Phase 3 lands within this Report for the purpose of providing functional-level design of SWMF No. 14, and for determining options to convey stormwater from the Phase 1 lands to be developed now, through the Phase 3 lands, and ultimately to SWMF No. 14 located within Phase 3 lands. Maplevue Drive East and 20th Sideroad in the vicinity of Maplevue Drive East are subject to an Environmental Assessment (EA) currently being undertaken by the City of Barrie. It is assumed that storm conveyance proposed in this FSR will be included in Maplevue Drive East and the 20th Sideroad.

As presented in the September 2016 SIS Report, it is proposed the development will be serviced by four end-of-pipe SWMFs, and this Report has been divided into four separate sections corresponding to each proposed SWMF location. The naming convention from the Hewitt's SIS has been used for ease of reference between the two Reports. Each Section will address the need to provide structural LID in order to achieve the LSRCA infiltration targets, Phosphorous (P) Budget Targets, Water Balance, and Peak Flow attenuation.

In general, an integrated treatment train approach, utilizing lot level/open space (where possible), conveyance, and end-of-pipe quantity control has been proposed to satisfy objectives set out by the SIS. The site will incorporate R.O.W. structural LIDs to filter, capture and convey minor and major system flows to stormwater management facilities located at strategic locations of the site.

The stormwater conveyance design will include the following elements:

- The site will be serviced by a conventional storm sewer system sized to convey the 5-year storm in accordance with City of Barrie standards.
- Provision will be made on the roadways for a continuous overland flow route or in oversized storm sewer, designed to convey the Regulatory Storm event (greater of the Regional or the 100-year event) through the site.
- In accordance with the City of Barrie standards, overland flow will be conveyed with flow depths not to exceed 0.20 m above the crown of Local Roads, and 0.10 m above the crown on Collector Roads and Arterial Roads.

It is proposed that storm sewers will be constructed with a minimum of 1.5 m of cover. Foundation drainage will be pumped to a ground discharge. Figure 05 (Preliminary Storm Drainage Plan) indicates a conceptual sewer layout, catchments, and overland flow routing for the proposed drainage system.

3.1 Post-Development Stormwater Model

A PCSWMM model was developed for the post-development conditions. The 6 hour-SCS, 24 hour-SCS-II and 4 hour-CHIC design storms were modelled for SIS for the 2- through 100-year storm events as per the City of Barrie, Stormwater Management Policies and Design Guidelines (2009), and it was found that the 24 hour SCS Storm governs for the site. We have focused on the 24 hour SCS storm as the Design Storm for this Report.

Please refer to Appendix D for a summary of the post-development catchments, including a breakdown of the impervious areas (tabulated from proposed road and lot layout surfaces) and input parameters for the PCSWMM Model.

The post-development will require extensive earthworks and regrading. We anticipate that the existing dominant soil type (at 1 m depth) used in the existing condition model will no longer apply in many areas. For the purpose of this Report, we have assumed that mixing of the soils will occur on a bulk basis across the site, and therefore we have selected the median infiltration rate from the 10 Guelph Permeameter test locations (18 tests) completed by Golder and Associates (see Report in Appendix A). We have taken the statistical mean of the results as representative of the mixed soils. As the sample group is an even number of results, the statistical mean is the average of the two median values at the middle of the group and was calculated to be 110 mm/hour. This infiltration rate has been applied for surface-pervious areas, the rate divided by 2.5 for linear R.O.W. LIDs, and the site-specific infiltration rate (divided by 2.5) has been used for SWMF or open space LIDs, as per LSRCA guidelines.

3.1.1 Catchment 11B and SWMF No. 11

In the post-development condition it is proposed to direct the runoff from 7.19 ha of land from immediately north of Maplevue Drive south, via a 100-year capture pipe through the 1091369 Ontario Inc. property on the south side of Maplevue Drive, to SWMF No. 11. Please refer to Figure 05 for the post-development catchment plan. This proposed configuration is as per the recommendations within Section 5.4.7.3 of the SIS, and was developed in consultation with both LM Barrie and 1091369 Ontario Inc. land owners. This area in the existing condition discharges to both Maplecort Subdivision and Maplevue Drive, and ultimately Hewitt's Creek. In the post-development, this area will ultimately be directed to Sandy Cove Creek. As part of the SIS, this exchange of drainage area was held to less than 2%, which was deemed acceptable by the LSRCA.

Catchment 11B will utilize LIDs within the R.O.W. (refer to Section 3.1.6 below for additional details) to reduce the peak flow and volume being directed to the end-of-pipe SWMF, and to help achieve the required water balance and P Budget reductions. It is also recommended to utilize lot level LIDs where possible (refer to Section 3.1.7 below for additional details). The 100-year capture storm pipe will need to extend west along Maplevue Drive East for approximately 90 m before taking a 90 degree turn south into the 1091369 Ontario Inc. lands. It is proposed that LM Barrie would construct this storm pipe to the 1091369 Ontario Inc. property line, at which point 1091369 Ontario Inc. would extend the pipe to the proposed SWMF (No. 11), which is to be designed by others.

The proposed land use is to be single-family residential homes with lot widths varying between 9 and 15 m, as well as some semi-detached homes.

3.1.2 Catchments 14A, 14B, 14-EXT, 209, EXT, and SWMF No. 14

Catchment 14 includes portions of Phase 1 and Phase 3 development lands. Although the current application is only for Draft Plan Approval for Phase 1 lands, the runoff from these lands must be conveyed through Phase 3 lands to the proposed location for SWMF No. 14 located along Maplevue Drive within Phase 3. It is proposed to design the facility to accommodate both the Phase 1 and Phase 3 lands initially to minimize the number of times the facility would need to be expanded or reconstructed.

Catchment 14A is 11.65 ha in size, including 10.89 ha of land within Phase 1 and 0.76 ha within Phase 3. Catchment 14B is 22.49 ha in size, including 13.06 ha of land within Phase 1 and 9.43 ha within Phase 3. There is a small parcel belonging to an external landowner, totaling 0.74 ha, which straddles the dividing line between Phase 1 and Phase 3. We have assumed these lands will also contribute flow to SWMF No. 14. Catchment EXT is part of the NHS lands and associated surrounding buffer that are not required to be routed to the SWMF and will not be developed. This NHS and buffer land area contributes runoff towards the rear lots of proposed residential development, and any runoff from these lands will need to be diverted using a cut-off swale and directed eastwards. Catchment 206 represents the pervious rear yards of some of the proposed residential development. It is proposed these pervious areas will flow to the rear yard/cut-off swale mentioned above. The design of the SWMF has taken the uncontrolled flow from this area into account and over-control has been provided.

Catchment 14-EXT represents a portion of Maplevue Drive East where runoff could be collected, conveyed eastwards, and routed through SWMF No. 14. As indicated within the SIS, this 1.0 ha area would need to provide controls for P reduction to achieve the LSRCA infiltration targets, and for a water balance.

The Phase 1 lands include both single-family residential lots and a small block of Townhouses. In addition, there is both a proposed School Block and Park Block in the northeast corner, with the Park Block being in Phase 1, and the School Block in Phase 3.

In the SIS, it was identified that portions of this catchment, which in the existing condition would have contributed runoff to Hewitt's Creek or Sandy Cove Creek, will in the post-development, contribute flow to Sandy Cove Creek and vice versa. This exchange of watershed land was kept to below 2%, which was deemed acceptable by the LSRCA.

It is proposed that structural LIDs would be implemented in the R.O.W. for filtration and infiltration. In addition, it is recommended that LIDs be implemented within lots and within the Park and School Blocks where possible in order to meet the P Budget, Infiltration and Water Balance Targets.

As part of Phase 1, infrastructure will be required to convey stormwater flows from the edge of the Phase 1 lands to a stormwater pond outfall immediately adjacent, located within Phase 3 lands. Catchment 14A drainage, which intersects Catchment 14-EXT, will be provided 100-year capture and conveyance via storm sewer east along Maplevue before turning north to a proposed SWMF No. 14 south forebay inlet location. In the case of Catchment 14B, the storm network includes sewers sized for 5-year flows, with continuous 100-year flow conveyed via ROW to the SWMF No. 14 north forebay inlet location.

3.1.3 Catchments 15, 15A and SWMF No. 15

The proposed SWMF No. 15 utilizes a subsurface infiltration gallery allowing the amalgamation of Park Block 609 and SWM Block. The proposed SWMF No. 15 facility is co-located with the aforementioned Park Block and consists of a stone gallery designed to detain and infiltrate the entirety of the 100-year runoff volume. By appropriately combining a portion of the underground SWM Facility with the Park Block, this alternative arrangement permits the addition of residential units which would have otherwise been required as land for a surface dry pond.

Catchments 15 and 15A are 21.58 ha and 5.14 ha in size respectively, and include lands from both LM Barrie and Blue Sky all within Phase 1. Catchment 15A represents rear yards and a large Park Block along the western boundary allowing drainage to the SWMF, thereby eliminating the need for additional LID units to mitigate runoff. Catchment 15 is composed entirely of single-family residential.

A portion of the contributing drainage area in the existing condition drains to Sandy Cove Creek. However, in the post-development condition, regrading is proposed to drain to Hewitt's Creek. This was done primarily to allow gravity sanitary flow for this area to connect with the Maplecort Subdivision. As outlined in Section 5.4.7.2 of the SIS, this exchange of drainage area between Hewitt's and Sandy Cove Creeks has been kept to below 2% and is deemed acceptable to the LSRCA.

The intent is to implement structural LIDs within the R.O.W., and where possible on private lots. The SWMF is intended to act as an infiltration basin to further reduce the

runoff from the site, help meet peak flow attenuation targets and improve the overall water balance.

100-year capture will be provided along the east limit of the Park Block adjacent to the proposed right-of-way, as well as along the designated overland flow route bordering the north limit of the Park Block. This will ensure that all runoff from storms up to and including the 100-year Design Storm will be collected and directed into the proposed subsurface infiltration area. The ideal sandy soil conditions found at the location of the proposed subsurface facility means Storm Events up to and including the 100-year Design Storm will be infiltrated.

Emergency overland flow discharge from SWMF No. 15 will be conveyed through a 20 m wide overland flow route located at the northwest limit of the Park Block, draining to Winchester Terrace R.O.W.

3.1.4 Catchment 16, 16A, 16B, 208 and SWMF No. 16

Catchment 16 (20.47 ha), 16A (1.65 ha), 16B (1.19 ha) and 208 (0.21 ha) form the northern part of the development immediately south of Big Bay Point Road. The catchments will consist entirely of single-family residential lots and the runoff generally flows from east to west. A small portion of Catchment 16 in the existing condition flows east to Sandy Cove Creek and the NHS area in the northeast part of the site. However, it is proposed to regrade this part of the site and direct it west to the SWMF rather than provide a second SWMF, try and control the runoff solely with LIDs, or overcompensate for the uncontrolled runoff in SWMF No. 16.

Catchments 16A and 16B represent areas that, under the current Draft Plan configuration cannot be graded to direct runoff to the SWMF. While completing the work to produce the SIS, it became our understanding that these areas are owned by Non-Participating HLOG members, which led to the current placement of SWMF. Further, it is now our understanding that the owner for 16A and 16B has joined the Hewitt's SPA Landowner Group, and options to relocate the SWMF further west and regrade may be possible in the future. For the purpose of this Report, we have assumed that the SWMF cannot be moved further west.

Catchment 208 represents a small area owned by Blue Sky which cannot be graded to directly flow to the SWMF, and as such, will discharge uncontrolled to the Big Bay Point Road R.O.W. 16A and this area will require either stand-alone LIDs or overcompensation within the SWMF to meet peak runoff and quality control targets. It is proposed that 16B be captured in 100-year storm sewers and directed to the SWMF.

The discharge location for the proposed SWMF is to Versailles Crescent in the Hamptons on Big Bay Point Development. A 100-year/Regional capture pipe will be required to transmit the discharge from the SWMF through the non-participating land owner's site to the rear yard storm structures between Lots 385/386, as an overland flow

route is not possible with the grading constraints and SWMF location. Alternatively, a 100-year/Regional capture pipe will be required from the SWMF to connect to the existing storm sewer on Sovereign's Gate at the intersection of the western end of Versailles Crescent.

The proposed location of the SWMF is in the highest measured infiltration rates within the site at 260 mm/hour. It is therefore proposed that this Facility would be an infiltration basin to try to achieve the pre-development peak flow targets, and to help achieve the infiltration targets set by the SIS and LSRCA.

3.1.5 Catchments 207 and 209

With the proposed regrading of Catchment 16, a portion of the area that currently discharges to Sandy Cove Creek will be redirected to Hewitt's Creek. Catchments 207 and 209 represent portions of this area that cannot be regraded to flow west to Hewitt's Creek and will continue to discharge to Sandy Cove Creek. These catchments are small, with a combined area of 0.81 ha, and will need stand-alone LID systems to provide quantity and quality control to pre-development levels.

3.1.6 Low Impact Development

As per the recommendations of the SIS, LSRCA and City of Barrie Transportation Guidelines, Low-Impact Development principles have been incorporated throughout the proposed development to help mitigate reliance on an end-of-pipe SWM Facility. A Grass Swale (Bioswale) Perforated Pipe System was selected as it will satisfy a range of quality objectives, as outlined in the Credit Valley Conservation – Low-Impact Development SWM Planning and Design Guide (2011). The development will include both inline R.O.W. LID measures, and inline non-R.O.W. LID measures.

Roadside LID locations have been proposed based on the Draft City of Barrie Transportation Design Manual, Standard R.O.W. Cross Sections BSD-301, and include a minimum 1.4 m deep stone-filled perforated pipe system, complete with roadside Bioretention Swale.

Conveyance to the systems will include near side curb cuts draining into roadside swales which will offer pre-treatment prior to infiltration. Far side connected catchbasins should be fitted with Catchbasin Shield inserts (or similar) and deepened sumps (0.8 m deep) to remove sediment prior to conveyance to the perforated pipe system. Both pre-treatment practices are recognized as suitable pre-treatment options by the Credit Valley Conservation – Low Impact Development SWM Planning and Design Guide (2011).

Constructed LIDs are to be plugged, and connection to the storm sewer shall occur only after the site is stabilized with vegetation.

Please refer to Figure 05 for the Preliminary Storm Drainage Plan, Figure 08 for Preliminary LID Locations, and to Figure 09 for LID Sections and Layout.

3.1.6.1 Lot Level and Open Space LID

Lot-level and open space LID practices are an additional mechanism to potentially increase the overall infiltration across a development, and help achieve an overall water balance. The SIS recommended exploring options for shallow, lot-level infiltration mechanisms in conjunction with conveyance controls.

The site wide application of 300 mm of absorbent landscaping topsoil has significant potential to reduce the reliance on R.O.W. structural LID and could greatly increase the overall site infiltration.

Single-family residential areas with 50% imperviousness were found to experience approximately 50% reduction in annual runoff volumes through the application of 300 mm of absorbent topsoil (British Columbia Ministry of Water, Land and Air Protection, May 2002).

No allowance for absorbent topsoil has been incorporated in the PCSWMM model. However we maintain our recommendation that absorbent topsoil be utilized to provide additional opportunity to naturally infiltrate runoff on a site-wide basis, before entering the LID and storm sewer network. Fully utilizing available pervious areas across the site is an opportunity to reduce the overall stormwater volume and peak flows received by LIDs and the SWM Facility, further reducing future maintenance requirements. The implementation of increased topsoil on all pervious areas (within Lots and within R.O.W.) could reduce the runoff volume by 30% on a net annual basis. This could significantly reduce the need for R.O.W. LID. We recommend that this option be explored further during detailed design.

3.1.6.2 LID Modelling

At detailed design stage, LID measures may require limited-scope additional geotechnical investigation on a location-specific basis to confirm infiltration capacity of the underlying soils. The ten locations selected for Guelph Permeameter testing were based on SWMF locations and key locations where LID measures were likely to be implemented.

LID geometry, such as depth or sizing, requires alteration from what is presented here to ensure ideal performance and to reflect forthcoming City LID standards or alterations required at an SIS level. The proposed LID units are intended to act in series and provide a treatment train for upstream catchments which cannot currently accommodate LIDs due to higher-density housing, and areas where lot frontages are narrower than 10 m, which limits the available R.O.W. frontage between driveways. Available LID

locations were further reduced to conform with the City of Barrie standard only allowing LIDs on the south or east side of the R.O.W.

Proposed LIDs were modelled on a catchment basis. Available LID areas were identified as those with lot widths of 10 m or greater and only on the east and south sides of the roads. The total linear length of R.O.W. LIDs was summed for the catchment and entered into the PCSWMM LID editor. In each Catchment, the percentage of the area potentially routed to the LID was determined based on the proposed grading. Any overflow from an LID is routed to the outlet. However, in detailed design, we recommend that LID overflow be modelled to the storm sewer network to ensure proper sizing of the pipe network.

Subsurface infiltration rates were reduced by a 2.5 factor of safety as per the LSRCA guidelines.

Please see Appendix E for detailed post-development LID parameter calculations.

3.1.6.3 LID Infiltration and Filtration Targets

The Hewitt's SIS identified the infiltration/filtration targets for the development as follows:

- Catchment 11B – 5 mm infiltration/20 mm filtration
- Catchment 14 – 12.5 mm infiltration/12.5 mm filtration
- Catchment 15 and 15A – 12.5 mm infiltration/12.5 mm filtration
- Catchment 16 and 16A – 25 mm infiltration

Based on the updated geotechnical information provided by Golders and Associates, the soils have more capacity for infiltration than was previously believed in the SIS, and as such, additional infiltration can be achieved on the site.

Please refer to Appendix E for details on the proposed LIDs (location, length and capacity for infiltration).

Catchment 11B

A total of 674.5 m of linear R.O.W. LID (bioswale and perforated pipe/infiltration) are proposed within Catchment 11B. The R.O.W. LID will provide a reduction of 33.3 mm of runoff from impervious areas during the 5-year 24 hour SCS Design Storm. This result exceeds the LSRCA target of 25 mm infiltration.

Catchment 14A and 14B

A total of 434 m of linear R.O.W. LID (bioswale and perforated pipe/infiltration) are proposed within Catchment 14A, with an additional 925 m length located within Catchment 14B. Catchment 209 includes a 0.8 m wide infiltration trench (300 m²). The R.O.W. LIDs will provide a reduction of 13.6 and 17.4 mm of runoff from impervious

areas during the 5-year 24 hour SCS Design Storm. This exceeds the SIS-identified target of 12.5 mm. The open space infiltration trenches can provide the full 25 mm infiltration target, and can accommodate significantly more as they have been sized to assist in the reduction of the overall peak flow for the Catchment.

Although some additional infiltration contribution are likely from SWMF No. 14, which is designed as a Constructed Wetland, soils at SWMF No. 14 were deemed not suitable enough to support an infiltration-based system, therefore no additional infiltration credit was assumed at this stage.

Catchments 15 and 15A

Infiltration targets have been provided within Appendix E to reflect catchment sizing and impervious coverage proposed within catchments 15 and 15A, which includes a combined Park Block and SWMF location. A total of 1,417.6 m of linear R.O.W. LIDs (bioswale and perforated pipe/infiltration) are proposed within Catchment 15. The subsurface SWMF provides the opportunity for overland flow generated within the park block to receive quality treatment and conveyance via interceptor swales before draining to the proposed SWMF. This eliminates that need for additional Park Block structural LID infiltration features. The SWMF facility was sized to include drainage generated from the Park Block and easily achieves targets recommended within the SIS.

Catchments 16, 16A, 16B, and 208

A total of 1,317.8 m of linear R.O.W. LIDs (bioswale and perforated pipe/infiltration) are proposed within Catchment 16. An additional 110 m² of infiltration trench is proposed within open space within Catchment 208. The R.O.W. LIDs will provide a reduction of 23.4 mm of runoff from impervious areas during the 5-year 24 hour SCS Design Storm. The open space infiltration trench can provide the full 25 mm infiltration target, and can accommodate significantly more as it has been sized to assist in the reduction of the overall peak flow for the Catchment.

This does not meet the SIS recommended infiltration target of 25 mm infiltration. However, the remaining infiltration and filtration target is to be accommodated within SWMF No. 16, which is designed as an infiltration basin.

We have assumed that, in the external Catchments 16A and 16B, they will have a combination of R.O.W. LIDs (38.4 m) and open space LIDs (350 m²). The R.O.W. LIDs can provide 11.4 mm of infiltration, while the open space LIDs can provide the full 25 mm infiltration, and could provide significantly more infiltration as it has been designed to assist in the overall Catchment peak flow reduction.

This does not meet the SIS recommended infiltration target of 25 mm infiltration for Catchment 16B, however the remaining infiltration and filtration target is to be accommodated within SWMF No. 16, which is designed as an infiltration basin. As both

Catchment 16A and 16B are owned by others, the specific LID design within this parcel will need to be confirmed during their design and approval process.

Catchments 204, 205, 206 and 207

It is proposed that, for all of these small catchments, open space infiltration trench LIDs be installed to achieve the 25 mm LSRCA target and to assist in overall peak flow controls. Please refer to Appendix E for details on the proposed infiltration gallery sizing.

3.1.7 Proposed Stormwater Facility Design

3.1.7.1 SWMF No. 11

SWMF No. 11 is to be located on the 1091369 Ontario Inc. lands south of Mapleview Drive East and will be designed by others. No additional discussion of SWMF No. 11 is required for this Report. Additional discussion regarding the 100-year peak runoff, infiltration within Catchment 11B, P removal and LID are provided below. Coordination with the 1091369 Ontario Inc. landowners will continue for the design of the required stormwater infrastructure. For the purposes of this Report, we have assumed that SWMF No. 11 will be a traditional wet pond.

3.1.7.2 SWMF No. 14

SWMF No. 14 is to be located within Blue Sky owned lands located north of Mapleview Drive East.

The facility has been designed as a Constructed Wetland, including two separate inlets into wet sediment forebays, located at the north and south limits of the pond, low-flow channels to provide necessary quality control, and a larger active storage component above that. Design sheets and calculations for the stormwater facility are provided in Appendix F.

The SWMF was designed as per the LSRCA guidelines, in which the total impervious area of the site that is routed through a quality LID was deducted from the overall site imperviousness. The reduction in the required permanent pool volume was determined based on the MOECC Stormwater Design Guidelines (2003) Table 3.2. In the case of SWMF No. 14, the imperviousness dropped to 20%, requiring a relatively small permanent pool volume. No quantity reduction has been applied based on the inclusion of infiltration LID as required by the LSRCA guidelines.

The required storage volume is provided in the SWMF Block using 6:1, 5:1, 4:1 and 3:1 side slopes to grade the Facility including a freeboard (0.3 m) above the 100-year and Regional water levels to the top of the pond, as shown on Figure 10. The proposed SWMF has a maximum storage capacity of 35,631 m³, of which 19,731 m³ is utilized as active storage above the permanent pool.

Minor and major Storm Events discharge from the site into the lined sediment forebays with 1.0 m deep permanent pool. The forebay has been designed with adequate dispersion length and non-erosive velocities as per the MOECC Stormwater Planning and Design Guidelines (2003). A weir within the forebay berm conveys the treated flows from the forebay to the main Constructed Wetland cell.

During Storm Events exceeding the 100-year or Regional Events, an emergency 1,800 mm diameter overflow pipe has been provided within the SWMF outlet control structure. The weir has been designed to provide safe conveyance of the greater of the proposed 100-year uncontrolled runoff, and uncontrolled Regional (Timmin's) flow to the emergency overflow stormsewer which transmits flow east along Maplevue Drive. The outlet structure and 1,800 mm diameter storm sewer will discharge flow to the 20th Sideroad R.O.W., where an existing culvert will transmit flow under the road to the east. A second culvert then conveys flow south under Maplevue Drive to Sandy Cove Creek.

Given the presence of NHS lands that are subject to an ongoing EIS, there are two scenarios proposed for the pond outlet to 20th Sideroad as generally described above. If the EIS concludes that the NHS designation is removed for the subject lands, then this does not become an issue. However, in the event that the NHS lands remain as currently designated and delineated, a design has been prepared to shift the overflow spillway and 100-year pipe outside of these limits. If the EIS concludes that the NHS lands can accommodate a stormwater outlet through them, then a more direct route will be designed to 20th Sideroad, for which an easement will be required. This easement is reflected conceptually on the Jones Draft Plan. The final configuration of this outlet will be determined at the detailed design stage, pending the results of the EIS.

The following Table summarizes the key elevations in the SWMF.

Table 3 Stormwater Management Facility No. 14 Key Elevations

SWMF Elevation	Feature/Storm
254.2	Bottom of Facility
255.2	Normal Water Level (NWL)
256.24	100-Year Water Level
256.89	Regional Storm Water Level
257.2	Freeboard/Regional Storm Pass Safely
257.5	Top of Pond

As shown in the above Table, both the 100-year and Regional water levels are maintained below the required freeboard of 0.3 m. This provides an added level of security within the pond. The stormwater facility provides a draw-down time of 24 hours for the bulk of the volume of the 25 mm rainfall Event. Faster draw-down of the 25 mm

Event is not possible while maintaining post-development peak flows less than pre-development flows for all Storm Events. Please refer to Appendix F for additional draw-down details.

Please refer to Figure 10 for Preliminary SWMF Design Facility No. 14

3.1.7.3 SWMF No. 15

The design for SWMF No. 15 is comprised of a subsurface infiltration gallery co-located within Park Block 608.

SWMF No. 15 is centrally located within the Park Block between the proposed senior soccer field and existing wooded area. Design sheets and calculations for the subsurface Stormwater Facility are provided in Appendix G.

No quantity reduction has been applied to the SWMF based on the inclusion of infiltration LIDs as required by the LSRCA guidelines. Please see Appendix I for post-development PCSWMM output for the Non-LID model.

The 100-year required storage volume is provided in the SWMF using a 3.0 m deep 50 mm clean stone gallery. The assumed geometry of the stone gallery includes a 1.25 m vertical base (constant area from 0 to 1.25 m depth) with a 1:1 sloping excavation (increasing in area at 1.25 m to 3.0 m depth) complete with 0.5 m of cover to proposed grade. A total of 11,157 m³ of active storage has been provided. At detailed design, the infiltration gallery could be optimized by increasing the footprint to include the overland flow route as useable subsurface stone gallery footprint, while maintaining provided storage volume, which would dramatically reduce the overall depth of the facility and provide increased opportunity for infiltration.

Available borehole information for the proposed SWMF15 location indicates "Sand, trace silt" at the assumed facility invert. Conservatively, a hydraulic conductivity of 44 mm/hour was applied to the SWMF representing the site wide assumed hydraulic conductivity of 110 mm/hour reduced by a factor of safety of 2.5. Additional infiltration testing during detailed design at the proposed SWMF15 could allow for optimization of the 100-year subsurface storage volume provided.

During Storms Events exceeding the 100-year or Regional Events, an emergency spillway has been provided within the stormwater management facility. The spillway is a 20 m wide trapezoidal weir located at the northwest corner of the facility. The spillway will direct flows from the internal streets through the park to Winchester Terrace. The spillway is for emergency situations only, and will not be used for the normal operation of the 2- through 100-year Design Storm Events.

The following Table summarizes the key elevations in the SWMF.

Table 4 Stormwater Management Facility No. 15 Key Elevations

SWMF Elevation	Feature/Storm
256.15	Bottom of Infiltration Gallery
256.65	25 mm CHIC Water Level
259.08	100-Year Water Level/Stone Obvert
259.15	Stone Storage Obvert
259.65	Proposed FG Grade
259.86	Regional Storm Water Level

As shown in the above Table, the 100-year volume is contained subsurface, and the Regional water level is maintained below the required maximum surface ponding of 0.3 m. The stormwater facility provides a draw-down time, due to natural infiltration, of less than 24 hours under the 25 mm Rainfall Event.

It should be noted that the operations and maintenance programs of the park uses and SWMF were considered in the co-location of the underground SWMF and park, and it is noted that this concept is supported in the City of Barrie's DRAFT LID Design Framework. Further refinement of the design to account for specific requirements of the park and SWMF can be accommodated within the proposed configuration.

3.1.7.4 SWMF No. 16

SWMF No. 16 is to be located near the northwest corner of the site, adjacent to the Hamptons on Big Bay Point Development, and has been designed as an infiltration basin with wet sediment forebay. Design sheets and calculations for the stormwater pond are provided in Appendix H.

The SWMF was designed as per the LSRCA guidelines, in which the total impervious area of the site that is routed through a quality LID was deducted from the overall site imperviousness. The reduction in the required permanent pool volume was determined based on the MOECC Stormwater Design Guidelines (2003) Table 3.2. In the case of SWMF No. 15, the imperviousness dropped to 12%, requiring a permanent pool volume which may be too small to be sustainable long-term. The permanent pool has been replaced instead with a wet sediment forebay and dry infiltration cell. The SWMF could have been designed as dry pond, however the underlying soils have the highest infiltration rate measured on the site (260 mm/hour) and without a liner, the Facility would naturally infiltrate any inflow.

No quantity reduction has been applied to the SWMF based on the inclusion of infiltration LIDs as required by the LSRCA guidelines.

The required storage volume is provided in the SWMF Block using 5:1, 4:1 and 3:1 side slopes to grade the stormwater management basin, including a freeboard (0.3 m) above

the 100-year and Regional water levels to the top of the pond, as shown on Figure 12. A total of 19,700 m³ of active storage has been provided with no permanent pool.

Minor and major Storm Events discharge from the site into a lined wet sediment forebay with 1 m deep permanent pool. The forebay has been designed with adequate dispersion length and non-erosive velocities as per the MOECC Stormwater Planning and Design Guidelines (2003). A weir within the forebay berm conveys the treated flows from the forebay to the main infiltration cell.

The SWMF will connect via a 100-year pipe to the existing 'total capture' pipe and structure provided at the rear of Lots 378/379 in the Hamptons on Big Bay Point Development. Alternatively a 100-year/Regional capture pipe will be required from the SWMF to connect to the existing storm sewer on Sovereign's Gate at the intersection of the western end of Versailles Crescent. An overland spillway was not possible for this facility due to the proposed grading, and therefore the pipe has been sized to accommodate 100% of the 100-year peak flow.

The following Table summarizes the key elevations in the SWMF.

Table 5 Stormwater Management Facility No. 16 Key Elevations

SWMF Elevation	Feature/Storm
260.00	Bottom of Infiltration Cell/Wet Forebay
261.30	NWL in Wet Forebay
261.89	100-Year Water Level
262.32	Regional Storm Water Level
263.00	Freeboard
260.30	Top of Pond

As shown in the above Table, both the 100-year and Regional water levels are maintained below the required freeboard of 0.3 m. The stormwater facility provides a draw-down time, due to infiltration, of less than 24 hours under the 25 mm Rainfall Event. Please refer to Appendix H for draw-down details.

Please refer to Figure 12 for Preliminary SWMF Design Facility No. 16

3.2 Post-Development Runoff Results

The multiple discharge points in the existing PCSWMM has been reduced by the implementation of SWMF and rerouting of flows where required. Tables 7 and 8 below demonstrate the modelled peak runoff for the Hewitt's Creek and Sandy Cove Creek subwatersheds respectively.

Table 6 Post-Development Discharge to Hewitt's Creek Subwatershed

Hewitt's Creek Proposed Model Summary		24 Hour SCS Type II Storm					
	Area(ha)	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
RJB Allowable Unitary Discharge Rate (m³/s/ha)		0.0024	0.0034	0.0039	0.0049	0.0055	0.0060
Catchment 15 Allowable Flows (m³/s)	26.7	0.06	0.09	0.10	0.13	0.15	0.16
Flows to SWMF 15 (m ³ /s)	26.7	2.10	3.00	3.61	4.37	4.94	5.50
Proposed Flows from SWMF 15 (m ³ /s)		0.00	0.00	0.00	0.00	0.00	0.00
Catchment 15 Total Proposed Discharge^A (m³/s)	26.7	0.00	0.00	0.00	0.00	0.00	0.00
Catchment 16 Allowable Flows (m³/s)	23.52	0.06	0.08	0.09	0.12	0.13	0.14
Flows to SWMF 16 (m ³ /s)	21.66	2.15	3.04	3.63	4.38	4.49	5.50
Proposed Flows from SWMF 16 (m ³ /s)		0.00	0.00	0.00	0.00	0.00	0.00
Flows from 16a (m ³ /s)	1.65	0.00	0.00	0.02	0.02	0.06	0.12
Flows from 208 (m ³ /s)	0.21	0.00	0.00	0.00	0.00	0.00	0.01
Catchment 16 Total Proposed Discharge^B (m³/s)	23.52	0.00	0.00	0.02	0.02	0.06	0.13
Discharge to Existing Subdivisions							
Catchment 204 to Mapleview Drive (at Maplecort)							
Pre-Development (127) Flows to Mapleview (m ³ /s)	6.54	0.09	0.12	0.14	0.17	0.19	0.21
Post-Dev. Catchment 204 Flows to Mapleview (m ³ /s)	0.29	0.03	0.04	0.05	0.06	0.06	0.07
Catchment 205 to Maplecort Dev. (Unicorn Lane)^C							
Allowable Flows to Unicorn (m ³ /s)		---	---	---	---	---	0.37
Post-Dev. Catchment 205 Flows to Unicorn (m ³ /s)	0.3	0.03	0.04	0.05	0.06	0.07	0.07

Notes

A - Catchment 15 to discharge to Winchester Terrace in Hamptons on Big Bay Development via 675 mm dia. pipe @1.9%, 1.2 cms capacity

B - Catchment 16 to discharge to Versailles Cres. in Hamptons on Big Bay Development via 750 mm dia. pipe @0.9%, 1.1 cms capacity

C - Maplecort Development accounted for up to 0.37 cms during 100 year event at this location.

Flows going to and leaving SWMF are reported from Non-LID model representing conservative interim conditions.

Flows from external catchments not entering a SWMF are LID model reported representing ultimate conditions.

Table 7 Post-Development Discharge to Sandy Cove Creek Subwatershed

Sandy Cove Creek Proposed Model Summary		24 - Year SCS					
	Area(ha)	2 - Year	5 - Year	10 - Year	25 - Year	50 - Year	100 - Year
RJB Allowable Unitary Discharge Rate (m³/s/ha)		0.0013	0.0017	0.0021	0.0025	0.0029	0.0033
Catchment 14 Total Allowable Discharge (m³/s)	35.1	0.04	0.06	0.07	0.09	0.10	0.12
Flows to SWMF 14 (m ³ /s)	35.1	2.88	4.17	5.02	6.12	6.93	7.74
Proposed Flows from SWMF 14 (m ³ /s)		0.05	0.06	0.06	0.08	0.10	0.11
Catchment 14 Total Proposed Discharge (m³/s)		0.05	0.06	0.06	0.08	0.10	0.11
Discharge to Existing Subdivisions							
Catchment 207+209 Discharge to Big Bay Point^A							
Pre-Development (132) Flows to Big Bay Point (m ³ /s)		0.01	0.01	0.01	0.01	0.02	0.02
Post-Dev. Catchment 207+209 Flows to Big Bay Point (m ³ /s)	1.92	0.00	0.00	0.00	0.00	0.00	0.01
Catchment 206 Discharge to 20th Sideroad							
Pre-Development Flows to 20th Sideroad (m ³ /s)	1.11	0.00	0.00	0.00	0.00	0.00	0.00
Post-Dev. Catchment 206 Flows to 20th Sideroad (m ³ /s)	1.11	0.00	0.00	0.00	0.00	0.00	0.00
Catchment 11B Discharge to Prop Development							
Post-Dev. Catchment 11B Flows to 20th Sideroad (m ³ /s)	7.19	0.16	0.46	0.68	0.96	1.14	1.32

Notes

A - Discharge is to NHS area which flows overland to Big Bay Point Drive at 20th Sideroad

Flows going to and leaving SWMF are reported from Non-LID model representing conservative interim conditions.

Flows from external catchments not entering a SWMF are LID model reported representing ultimate conditions.

Please refer to Appendix I for the PCSWMM Output Summary. The above Tables demonstrate that the **peak flows offsite are less than the pre-development, and are less than those established under the SIS for all Storm Events, up to and including the 100-year Storm, and discharge to existing subdivisions is less than the allowable, based on the As-Constructed information.**

In the case of Catchment 11B, the calculated peak runoff in the 100-year Storm Event is equal to 1.82 m³/s. This flow will require a 1,050 mm dia. pipe at a minimum slope of 0.50% in order to convey the flow west to the 1091369 Ontario Inc. Lands via Mapleview Drive East.

In the case of Catchment 14, the calculated peak runoff in the 100-year Storm Event is equal to 7.74 m³/s. This flow will require a 1,800 mm dia. pipe at a minimum slope of 0.50% in order to convey the flow east along Mapleview Drive East, and then north to SWMF No. 14.

3.3 Water Balance

The SIS presented an Overall Water Balance for both Hewitt's Creek and Sandy Cove Creek. The calculations were completed using both the Thornwaithe Method and by using a continuous simulation model. Table 30 of the SIS indicates that that, for all of Hewitt's and Sandy Cove Creeks, the existing condition infiltration is equal to 2,853,131 m³ and 1,487,685 m³ respectively. The infiltration without LID is shown as 1,890,100 m³ and 877,522 m³ respectively, and with the recommended LIDs in place, the infiltration would increase to 2,255,148 m³ and 1,080,935 m³ respectively. The calculated reduction in infiltration is 21% for Hewitt's Creek and 27% for Sandy Cove Creek. As the requirement in the LSRCA is 'best efforts', at this time our understanding is that if the SIS recommendations for infiltration are followed, then the 'best efforts' will have been achieved.

Due to the additional geotechnical information available for the LM Barrie/Blue Sky site, which shows better soils for infiltration than was previously believed, we anticipated that both the existing condition infiltration totals and the post-development infiltration totals would increase.

The continuous simulation model was run as per the original SIS, and the results indicate a net reduction in infiltration between existing and proposed of 15% for Hewitt's Creek and 18% for Sandy Cove Creek, **which satisfies the requirement for 'best efforts' towards a water balance for the site.**

3.4 Stormwater Quality Control

Level 1 control (i.e., 'enhanced protection' or 80% TSS removal) is the recommended level of quality control for the proposed development. A treatment train approach, incorporating screening of suspended solids (catchbasin inserts), vegetative filter media

(swales), forebay settling and infiltration has been developed to satisfy the enhanced protection standard set out by the LSRCA. It should be noted that end-of-pipe infiltration has effectively eliminated any opportunity for TSS or nutrient discharging from the developed portions of site.

3.4.1 Catchbasin Inserts and Deepened Sumps

All catchbasins on the proposed site will be fitted with Catchbasin Shield Inserts (or equivalent) to remove sediment prior to entering the storm sewer network or GSP systems. The TSS removal capacity of Catchbasin Shields is dependent on both the size and imperviousness of contributing areas. Efficiency has been approximated using the average subcatchment area of 0.4 ha, assuming half the R.O.W. will drain to catchbasin inserts (other half to bioswale). Therefore, a 0.2 ha area with 55% imperviousness draining to an assumed two catchbasins is stated as having a TSS removal of approximately 54%. Please refer to Appendix J for Catchbasin Shield removal efficiency details.

Deepened sumps will also be provided to further reduce heavier sediments from entering the storm sewer network.

3.4.2 Bioretention/Perforated Pipe Infiltration System

Bioretention/Perforated Pipe Infiltration Systems are proposed for inline R.O.W. The system will feature a 1.2 m wide stone-filled trench, complete with a perforated 200 mm dia. smooth-walled pipe with a minimum 1.2 m (frost protection) cover, as specified in the Credit Valley Conservation – Low Impact Development SWM Planning and Design Guide 2011. Bioretention swales will be 2.3 m wide and 0.3 m deep in conformance with City of Barrie Standard Cross Section BSD-301, Draft Transportation Design Manual.

Expected TSS removal efficiency ranges from 81 to 95% as documented in the Report “20 Year Performance Evaluation of Grass Swale and Perforated Pipe Drainage Systems”, by J.F. Savourin and Associates Inc. (July 2008). Catchments which do not feature LID units due to limited available area may act in series with downstream LID locations through the offline connection of LIDs to the storm sewer network. Based on the MOECC P Budget tool, the expected P removal of these systems is 87%.

3.4.3 Stormwater Facility Quality Treatment

The stormwater management facilities have all been designed with a wet sediment forebay which exceeds the suggested MOECC dispersion, settling and length-to-width ratio for quality treatment. The forebay volumes have been designed to exceed the expected 25 mm runoff volume, ensuring only thoroughly-clarified water enters the infiltration cell, or in the case of SWMF No. 14, the Constructed Wetland. Complete infiltration of the 25 mm quality storm runoff entering the stormwater facility

(SWMF Nos. 15 and 16) ensures 100% TSS removal as stipulated in the Report “Managing New Urban Development in Phosphorus Sensitive Watersheds” by Hutchinson Environmental Sciences Limited (2014). In the case of SWMF No. 14, the upstream infiltration/filtration LID will remove a minimum of 80% TSS, with the Constructed Wetland/wet sediment forebay ensuring a similar (80%) removal efficiency.

3.4.4 OGS Alternative

SWMF No. 15 presented in Section 3.1.7.3 proposes 100-year capture of stormwater drainage prior to discharge to the subsurface infiltration gallery. In order to provide the necessary quality control, an OGS unit may be required. The application of an OGS unit may permit a reduction in upstream R.O.W. LIDs if it is confirmed that water balance and infiltration objectives are satisfied under this design approach. A preliminary OGS sizing has been included in Appendix J, which would provide enhanced level treatment to Catchment 15 (21.58 ha) at 57% imperviousness assuming a “FINE” treatment particle size distribution. Catchment 15A (5.14 ha) is comprised of rear lot and Park Block drainage, constituting clean runoff not requiring additional treatment.

4.0 Phosphorus Budget Loading

LSRCA guidelines stipulate a maximum allowable post-development phosphorus loading of 80% of pre-development loading, and a 'best effort' target of an additional 20% reduction beyond this level.

Land use calculations were updated slightly from what was presented in the SIS for both pre- and post-development. Where possible, post-development areas drain to phosphorus reduction measures such as LIDs and SWMFs. As per the information presented in the SIS and in the MOECC P Budget, routing flow through a perforated pipe infiltration LID will provide an 87% reduction in the P levels. Flow into an infiltration basin (with wet sediment forebay) assumes a P reduction of 100%, and flow through a Constructed Wetland provides a removal rate of 77%.

In cases where complete infiltration of stormwater runoff was achieved, a P removal treatment efficiency of 100% was applied, as recommended in the Report "Managing New Urban Development in Phosphorus Sensitive Watersheds" by Hutchinson Environmental Sciences Limited (2014).

Pre-development loading for the Hewitt's Creek portions of the development equate to 5.75 kg/year, while the Sandy Cove Creek loading is equivalent to 6.36 kg/year. In the post-development condition with no controls in place, the Hewitt's Creek discharge from the development lands is equal to 60.93 kg/year, and to Sandy Cove Creek, 56.96 kg/year.

Based on the proposed R.O.W. LIDs and end-of-pipe conditions, the post-development discharge to Hewitt's Creek would be reduced to 3.30 kg/yr (43% net reduction in load from pre-development), and to 4.66 kg/yr for Sandy Cove Creek (27% net reduction in load from pre-development).

Please refer to Appendix K for the detailed MOECC P Budget Tool Report.

In the case of Catchment 11B where LID will provide 87% removal of P loading, it is assumed that an additional 67% removal would be provided in SWMF No. 11.

5.0 Wastewater Servicing

5.1 Design Criteria

The proposed wastewater sewers will be designed and constructed to current City of Barrie and MOECC criteria and specifications (most notably, the recently circulated Draft version of the City's *Sanitary Sewage Collection System Policies and Design Guideline*). The following summary of applicable City of Barrie criteria will be applied in generating average and peak design flows:

- Residential flow rate – 225 L/capita/day
- Commercial Flow rate – 28 m³/day/ha (0.324 L/sec/ha)
- Infiltration – 0.1 L/sec/ha
- Peaking Factor – Harmon Peaking Factor Formula or Babbitt Peaking Factor Formula, whichever is higher
- Population Densities:
 - Low Density (Single Detached Units) – 3.13 ppu
 - Medium Density (Townhouse Units) – 2.34 ppu
 - High Density (Apartment Dwellings) – 1.67 ppu
- Design Minimums:
 - Pipe Diameter: (200 mm Residential/250 mm ICI)
 - Flow Velocity: 0.60 m/s, excluding extraneous flows
 - Slopes: 0.4% where minimum velocity is achieved, 2.0% for first run dead-ends

It should be noted that at a functional design level, some of these design details have not yet been integrated. Sanitary Design Sheets will be prepared during the detailed design stage and will confirm that the above parameters are within the acceptable limits per City of Barrie standards.

5.2 Proposed Wastewater Sewersheds and Discharge Points

Figure 06 (Preliminary Sanitary Drainage Plan) of this FSR is a preliminary plan indicating the proposed sub-drainage areas to each local connection point (both to proposed and existing infrastructure), as well as layout and routing for the proposed sanitary sewers within the development area. The layout is consistent with the Figure 15 of the SIS. The current concept plan includes 1,812 residential units and 36 apartment units. The plan also includes additional development areas designated as Future Commercial lands.

On Street 1, from Street 2 to the westerly limit of the site, dual sewers are proposed, with an upper collector sewer proposed from MH 12 to MH 13. The relatively shallow collector sewer would be installed approximately 3 m below road centerline elevation to collect lot services, and drop structures would be installed at the end of each run connecting to the outfall sewer below.

The internal sanitary sewer systems will discharge to multiple outlet points (existing gravity sewers) along the western flankage of the development lands. These existing Connection Points E6 to E9 are established in Table 8.2A of the Hewitt's SIS. There are two proposed gravity connection points, at the south limit of the development lands, to the local Maplevue Trunk Sanitary Sewer (P1 and P2). Timing and Cost Sharing for the Hewitt's Trunk will be determined at detailed design.

The Hewitt's SIS includes the proposed infrastructure timing. As such, this information is not repeated in this Report.

It should be noted that there is a proposed 9.0 m rear lane on the LMB Draft Plan that is proposed to not contain any services. The intent is that this lane will have one-way traffic and street lighting only, with no other services, transformers, or sidewalks. Therefore, the lane will be serviced most effectively from laterals via a local (shallow) sewer on Maplevue Drive from the lot frontages, either as a "stacked" arrangement directly above the trunk, or offset to the north side on Maplevue Drive. This local sewer can connect into the adjacent local sewer network internal to the subdivision, thereby not necessitating an additional drop connection into the Maplevue Trunk.

6.0 Water Distribution

6.1 Design Criteria

The proposed water distribution within the property will be designed and constructed to current City of Barrie and MOECC criteria and specifications.

Previous studies for the Hewitt's SPA have established the sizing requirements for trunk watermain, including the 300 mm watermain within Streets 'A' and 'B', Maplevue Drive and 20th Sideroad, and a 400 mm watermain within Big Bay Point Road. Local water infrastructure will be comprised of 150 to 200 mm watermain as specified in previous studies. Refer to the Hewitt's SIS Figure 12, which displays the Water Supply for the Hewitt's Secondary Plan. These sizes are taken from the City of Barrie Master Plan.

6.2 Proposed Water Distribution Layout

Figure 07 (Preliminary Water Distribution Plan) of this FSR is a preliminary plan indicating connection points, as well as layout and routing for the proposed watermain, and required sizes within the development area. The layout is consistent with the Hewitt's SIS Figure 12 and no additional changes are proposed within this submission from what was presented at the SIS level.

As noted above, there is a 9.0 m rear lane proposed on the LMB Draft Plan that is proposed to not contain any services. The lane will be serviced most effectively by a small-diameter watermain loop from the subdivision roads, and along the lot frontages on Maplevue Drive.

7.0 Utilities and Roads

7.1 Roads and Lane Ways

Road way ROWs are based on City of Barrie standards for a 23 m ROW (BSD-03) and 18 m ROW (Draft BSD-301). The proposed 9 m ROW Public Lane Way is shown in Figure 09.

The proposed 9 m ROW design excludes utilities (other than streetlights) and has 6 m of asphalt allowing two-way traffic. It is noted that in discussions with City staff on the Draft Transportation Manual (January 19, 2017), staff advised that this public laneway could have one-way traffic only. This would allow for reduction of the asphalt width to 5.0 m. For adequate minor and major system drainage of the 9 m ROW, a short segment of storm sewer will be required, as the gathering length, as indicated on Fig 04, exceeds 90 m.

7.2 Utilities

Utilities will be installed in a joint utility trench. Design will be by provided by the utility companies, led by the Innpower layout primarily. Through ongoing consultation with Innpower (hydro) and Enbridge (natural gas), adequate external utility supply has been confirmed.

8.0 Site Grading

The conceptual site grading design provided as Figure 4 of this FSR has been developed in consideration of the following requirements and constraints:

- Conformance to the City of Barrie grading and drainage criteria.
- Matching of existing boundary grades where applicable.
- Consideration for future full urban cross section for Big Bay Point Road and Maplevue Drive.
- Coordination of grading at the interface with the adjacent landowners to the east and west.
- Optimization of earthworks (i.e., minimizing fill export).
- Provision for adequate cover on proposed services.
- Provision for overland flow conveyance on the roadways to the proposed stormwater facilities (i.e., major system storm drainage and emergency overland flow).

The road grades indicated allow for overland flow conveyance on the future right-of-ways in order to direct major system storm drainage to the future stormwater facility location.

The site grading design is depicted on Figure 4 generally corresponds to the grading depicted in Hewitt's SIS Figure 8.

9.0 Erosion and Sediment Control During Construction

The erosion and sediment control plan for the site will be developed in accordance with the City of Barrie and LSRCA guidelines. The plan will be completed at detailed design prior to the undertaking of any grading activity on the site.

Erosion and sediment control will be implemented for all construction activities including topsoil stripping, foundation excavation and stockpiling of material. The following erosion and sediment control measures will be implemented:

- A temporary sediment control fence will be placed around perimeter of all areas to be disturbed prior to grading. Double row fencing may be appropriate adjacent to sensitive natural areas.
- Appropriately designed sediment control ponds will be provided.
- Catchbasin sediment traps will be provided.
- Check dams, etc., for erosion / velocity control will be provided.
- Gravel mud mats will be provided at all construction access points to minimize off-site tracking of sediments.

All temporary erosion and sediment control measures will be routinely inspected and repaired during construction. Temporary controls will not be removed until the areas they serve are have been restored and stabilized.

Connection to LID measures will not be completed until the site is stabilized with vegetation to minimize sediment accumulation and maintenance issues.

The forebay of the proposed stormwater management facility should be utilized during the construction of the site as a sediment basin. The site naturally flows to the north, and the location of a sediment basin in this location, combined with appropriate fencing, should act as an affective sediment barrier. The basin should be installed prior to the start of the earthworks operation and be maintained through site servicing, until the site is stabilized and the dry pond/infiltration gallery is installed.

All reasonable measures will be taken to ensure that sediment loading is minimized both during and following construction. Additional details will be provided as part of the detailed design.

10.0 SIS Recommendations

The following is a list of the recommendations from the Hewitt's Subwatershed Impact Study (SIS) Lover's, Hewitt's and Sandy Cove Creeks (2016) that need to be applied to the LM Barrie and Blue Sky Development:

1. Post- to pre-quantity control for the 2- to 100-year storm events (inclusive) and provide safe conveyance for the Regional Storm event.
2. Stormwater quality controls to a minimum of the MOECC 'Enhanced' level of treatment (80% TSS Removal for the 4 hour 25 mm Chicago Storm).
3. A minimum of 80% total Phosphorous removal (with a 'best efforts' target of 100% removal) as per the LSRCA June 2016 SWM Guidelines.
4. Efforts to provide temperature mitigation on all stormwater discharged to Lover's, Hewitt's and Sandy Cove Creeks.
5. Filtration of runoff for the equivalent of 25 mm of runoff from all new impervious areas.
6. Infiltration of runoff for the equivalent of 25 mm of runoff from all new impervious areas, unless evidence can be provided that indicates that 25 mm is not possible. In the case where 25 mm is not possible, 12.5 mm shall be applied. Where 12.5 mm cannot be achieved, 5 mm shall be applied. Where 5 mm cannot be achieved, 'best efforts' or offsite compensation shall be provided in negotiation with the LSRCA and City of Barrie.
7. LID principles should be applied where possible as per the LSRCA guidelines and City of Barrie including LIDs within the R.O.W., open spaces, Park Blocks, School Blocks, and use of NHS buffer zones for passive or structural LID where feasible.
8. Additional topsoil depth (minimum 300 mm) on all pervious areas (regardless of underlying soil type) could be implemented to reach infiltration targets. LSRCA, City and MOECC pre-consultation required to confirm credit for LID on private lots.
9. Constructed wetlands should be implemented where end-of-pipe controls are required to provide the highest level of TP removal and mitigate temperature of discharge.

10. Catchment 11/11B

- a) Provide an end-of-pipe SWMF within Catchment 11 to provide quality and quantity controls for Catchments 11 and 11B as per LSRCA and City standards. Specific SWMF characteristics and precise location to be determined at Draft Plan and detailed design stage.
- b) 'Best efforts' towards a 5 mm infiltration target, with filtration/attenuation for the remainder of the 25 mm target for Catchment 11, and a 5 mm infiltration target should be pursued at detailed design for Catchment 11B, with an additional 20 mm filtration target.
- c) A 100-year capture stormwater pipe is to be provided from Catchment 11B to SWMF No. 11.
- d) Infiltration/filtration LIDs to be provided within the R.O.W., NHS buffer, and on pervious areas of private lots where possible.

11. Catchment 14A/14B/14EXT

- a) Provide an end-of-pipe SWMF within Catchment 14 to provide quality and quantity controls as per LSRCA and City standards. Specific SWMF characteristics and precise location to be determined at Draft Plan and detailed design stage. Conveyance of pre-2031 flows to be conveyed across post-2031 lands in coordination with the land owner(s).
- b) A 12.5 mm infiltration target should be pursued at detailed design with an additional 12.5 mm filtration target.
- c) External drainage area (14-EXT) to provide stand-alone TP removal measures and infiltration/filtration LID to LSRCA standards.
- d) Infiltration/filtration LID to be provided within the R.O.W., Park Block, School Block, and on pervious areas of private lots where possible.

12. Catchment 15/15A

- a) Provide an end-of-pipe SWMF within Catchment 15 to provide quality and quantity controls as per LSRCA and City standards. Specific SWMF characteristics and precise location to be determined at Draft Plan and detailed design stage. Overcompensation for runoff from Catchment 15A bypassing the SWMF to be provided in SWMF No. 15.
- b) Outlet from SWMF to connect to existing storm sewer on Winchester Terrace.

- c) A 12.5 mm infiltration target should be pursued at detailed design with an additional 12.5 mm filtration target.
- d) Infiltration/filtration LID to be provided within the R.O.W., Park Block, and on pervious areas of private lots where possible.

13. Catchment 16/16A

- a) Provide an end-of-pipe SWMF within Catchment 16 to provide quality and quantity controls as per LSRCA and City standards. Specific SWMF characteristics and precise location to be determined at Draft Plan and detailed design stage. Overcompensation for runoff from Catchment 16A bypassing the SWMF to be provided in SWMF No. 16.
- b) 100-year storm outlet from SWMF to connect to existing storm sewer on Versailles Crescent.
- c) A 25 mm infiltration target should be pursued at detailed design.
- d) Infiltration LID to be provided within the R.O.W. and on pervious areas of private lots where possible.

This Report demonstrates how all the above recommendations from the SIS can be achieved for the LM Barrie and Blue Sky Development. Through the use of LIDs, filtration and infiltration targets have been met throughout the site. The additional required quality and quantity control has been achieved through the use of infiltration basins at SWMF Nos. 15 and 16, where high infiltration rates have been observed, as well as a Constructed Wetland at SWMF No. 14. As per the recommendations, the infiltration basins will eliminate phosphorus migration from the site and the need for temperature mitigation. The wetland will provide the highest level of TP removal and temperature mitigation of discharge. **Therefore, the proposed design within this FSR is in compliance with the SIS.**

11.0 Conclusions and Recommendations

This Report addresses the requirements for submission of a Functional Servicing Report to support the current Draft Plan Applications for LM Barrie and Blue Sky Development. The following summary conclusions are presented:

- The proposed storm drainage system will be designed in compliance with the Hewitt's Subwatershed Impact Study, MOECC guidelines, City of Barrie Design Criteria and Lake Simcoe Region Conservation Authority requirements.
- The proposed SWM Facilities have achieved lower pre-development runoff than was recommended in the SIS study.
- LID controls in the form of a bioswale and perforated pipe infiltration trench should be implemented to promote infiltration and help meet the pre development flow targets.
- Additional credit for infiltration on pervious areas with additional topsoil depths should be explored with the City and LSRCA at detailed design level.
- The combined LID and end-of-pipe SWMF will act as a treatment train to provide the recommended phosphorous removal.
- Water servicing will be accomplished by connection to the proposed watermain to be constructed within the adjacent Maplevue Drive East and Big Bay Point Road right-of-ways, as well as existing locations to the west.
- The development will be served by connection to existing Connection Points E6 to E9, and proposed Connection Points P1 and P2.

This Functional Servicing Report demonstrates that the LM Barrie and Blue Sky Development can be developed on full municipal services. Stormwater management measures can be implemented to meet all required runoff and surface water quality criteria of the governing agencies. The proposed Draft Plan accommodates the functional servicing and stormwater management concepts presented in this Report.

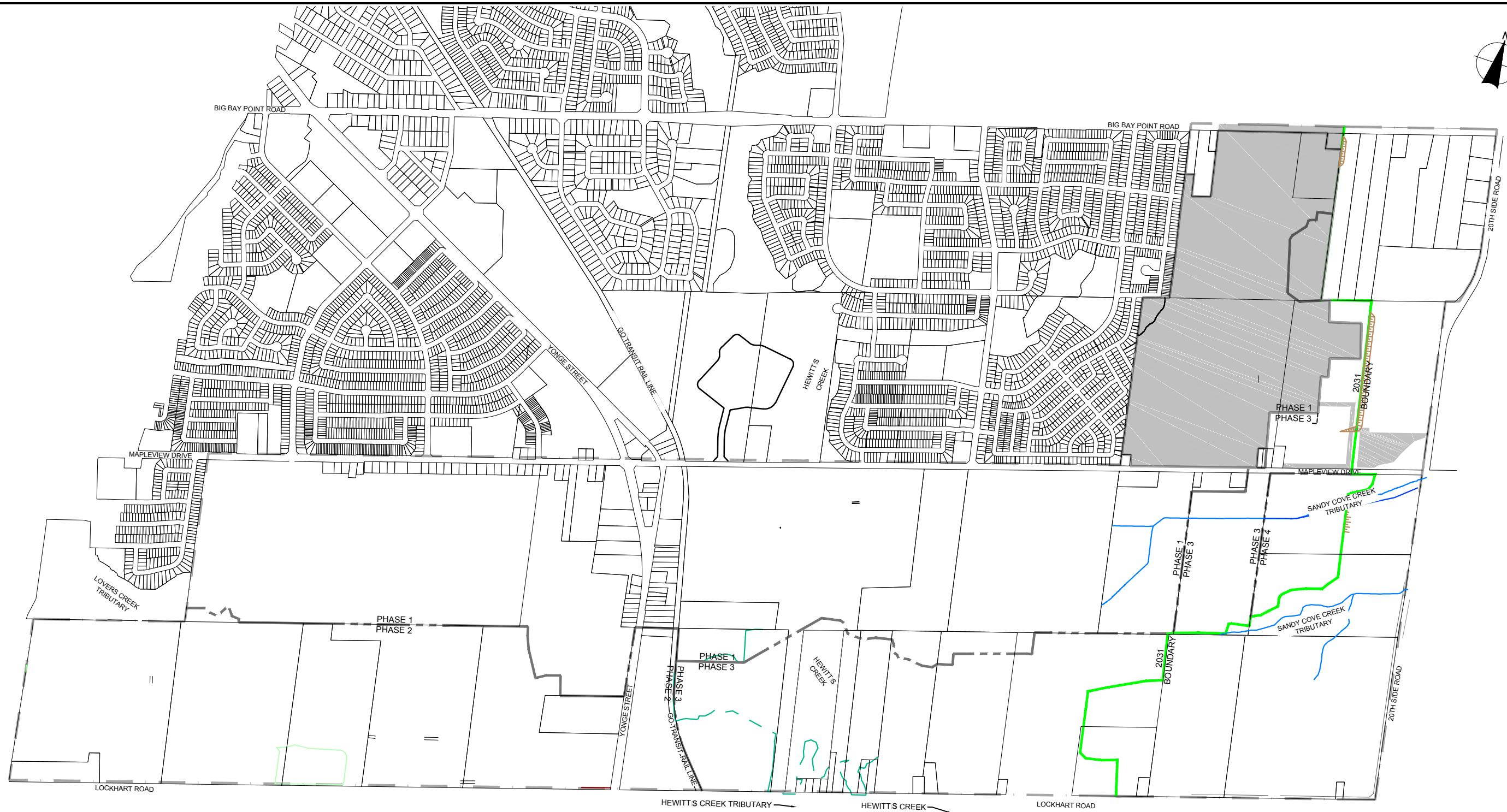


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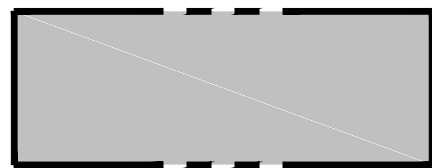
[THE DIFFERENCE IS OUR PEOPLE]



Figures



LIMIT OF HEWITT'S CREEK
SECONDARY PLAN



LIMIT OF SUBJECT SITE



LM BARRIE / BLUE SKY

Figure Title

LMB / Blue Sky FSR

LOCATION AND BOUNDARY PLAN

Client

Drawn

BH

Checked

CC

Date

JAN 27, 2017

Scale

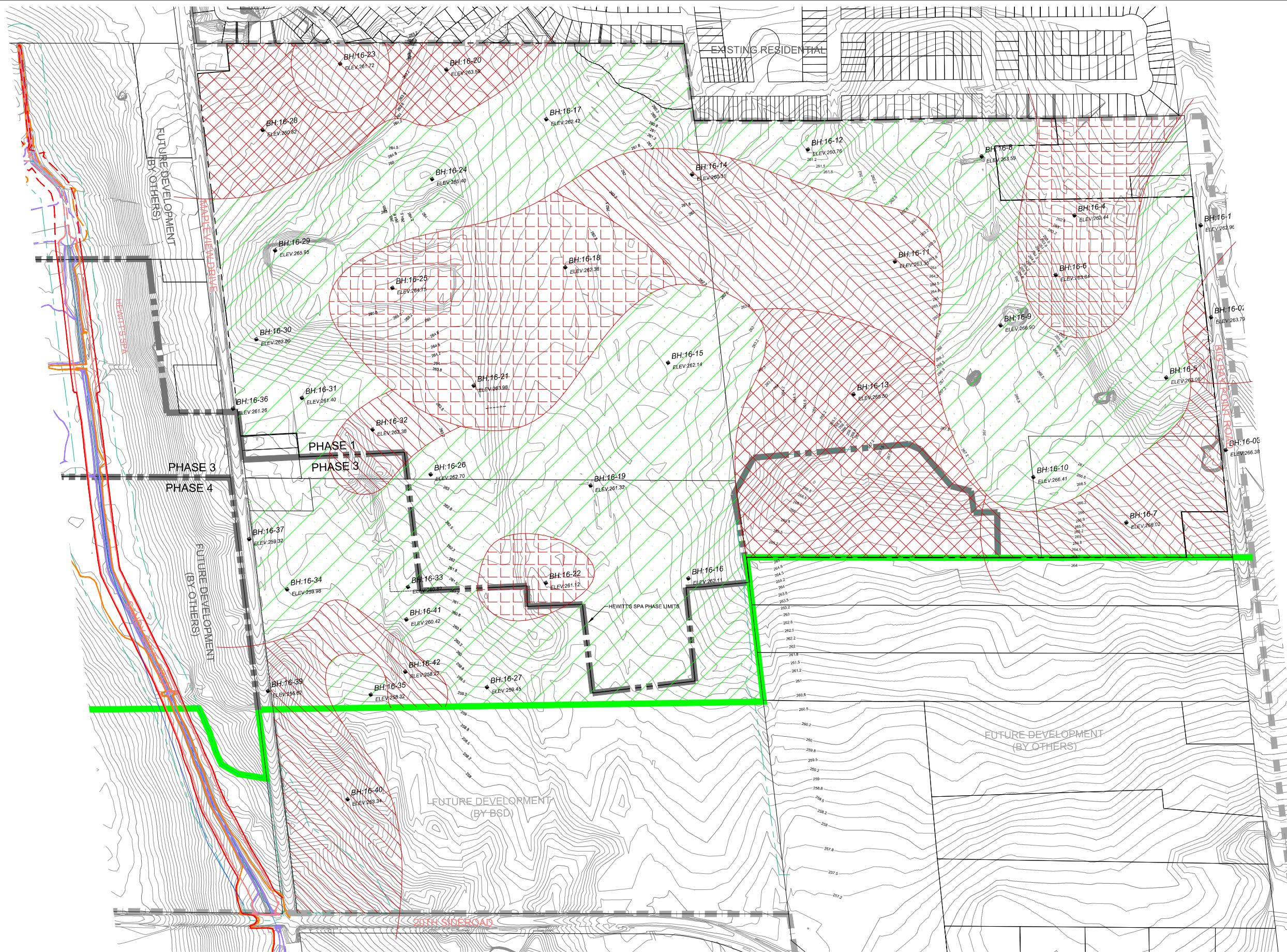
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300039296

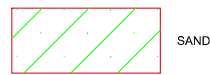
Figure No.

FIG01

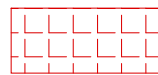


LEGEND

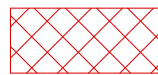
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- NHS BUFFER LIMITS
- CoB GENERATED BUFFER LIMITS (2013)
- 2031 BOUNDARY
- HEWITT'S SPA PHASE BOUNDARY



SAND



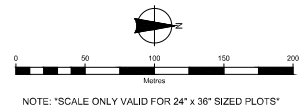
SILTY CLAY



SANDY SILT

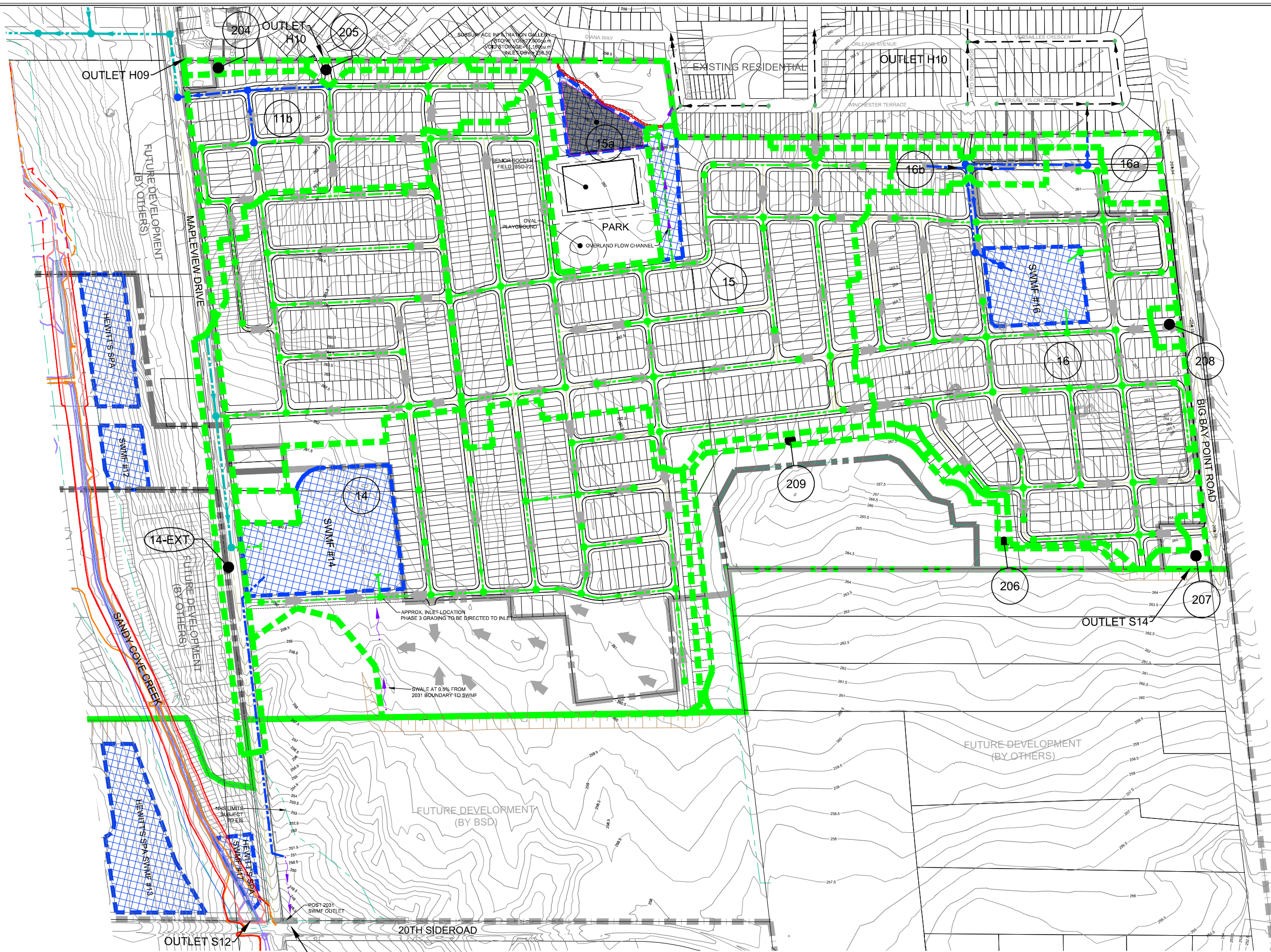


SILTY SAND



LM BARRIE / BLUE SKY

Figure Title				Figure No. FIG03
LMB / Blue Sky FSR				
EXISTING CONDITIONS SOIL MAPPING				
Drawn BH	Checked CC	Date JAN 27, 2017		
Scale H 1:2,500" V N/A	Project No. 300039296			

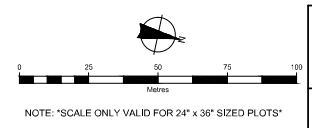


LEGEND

- NHS LIMITS
- NHS BUFFER LIMITS
- 100 YEAR CAPTURE AREA
- 2031 PHASE LIMITS
- EXISTING 100 YR FLOOD LIMITS
- EXISTING REGIONAL FLOOD LIMITS
- PROPOSED 100 YR FLOOD LIMITS
- PROPOSED REGIONAL FLOOD LIMITS
- PROPOSED DRAINAGE BOUNDARY
- ORIGINAL WATERSHED BOUNDARY

DASHED FLOOD LINES ARE APPROXIMATE ONLY, BASED ON INTERPOLATED DATA BETWEEN FINGERLAKES AND 1091369 ONTARIO INC. DETAILED TOPOGRAPHIC DATA, FLOODLINES ARE SUBJECT TO CHANGE BASED ON ADDITION OF DETAILED TOPOGRAPHIC SURVEY.

- FLOW DIRECTION
- STORM SEWER SYSTEM
- 100 YR CAPTURE SEWER, MANHOLE
- 100YR CONVEYANCE SYSTEM WITH 5YR CAPTURE
- 5 YR CAPTURE SEWER, MANHOLE
- EXISTING STORM SEWER, MANHOLE

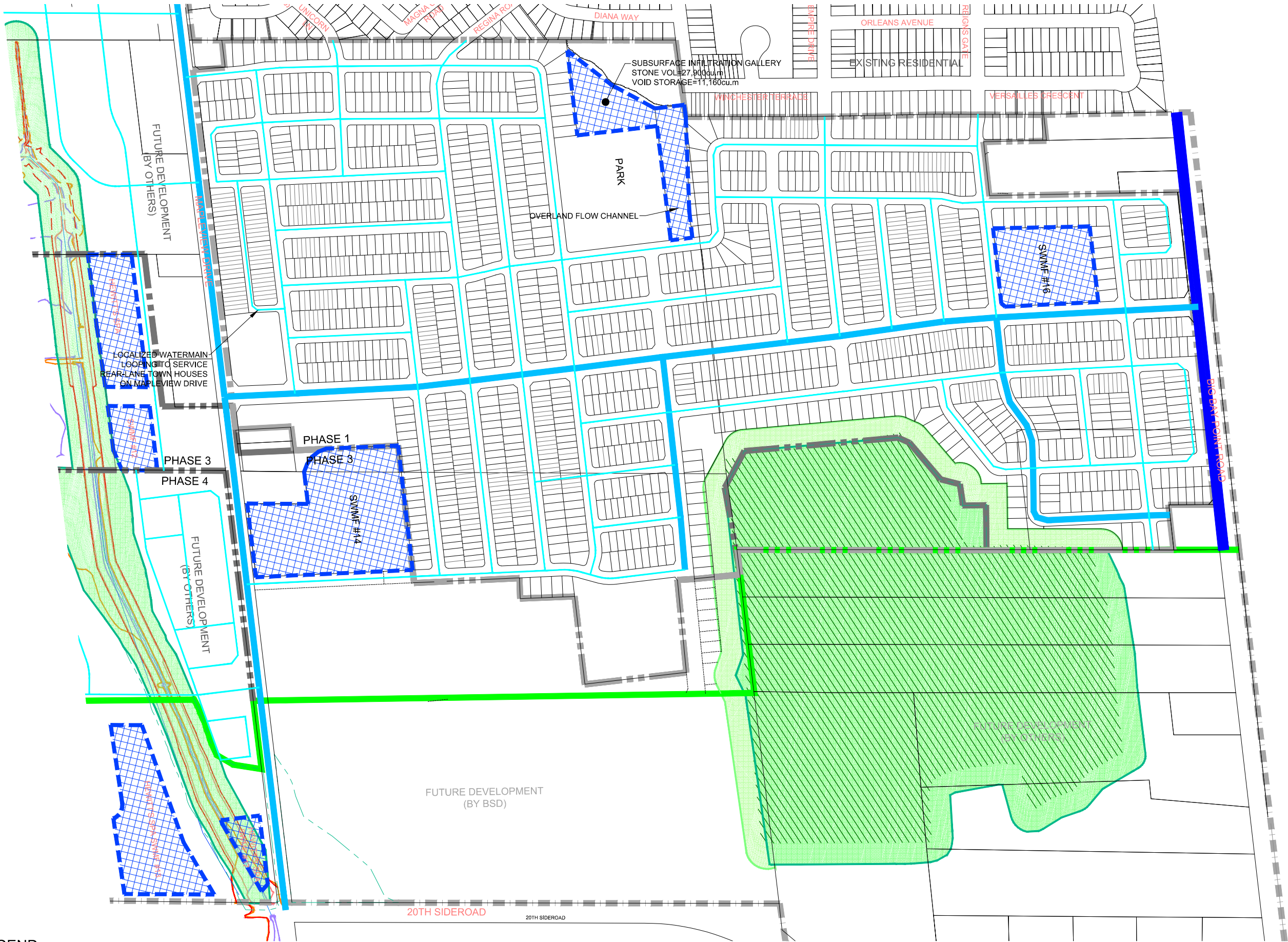


NOTE: "SCALE ONLY VALID FOR 24" x 36" SIZED PLOTS"



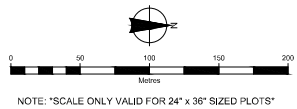
LM BARRIE / BLUE SKY

Figure Title		LMB / Blue Sky FSR	
		PRELIMINARY STORM DRAINAGE PLAN	
Client	Drawn	Checked	Date
	BH	CC	JAN 27, 2017
	Scale	Project No.	
	H 1:2,500" V N/A	300039296	
Figure No.		FIG05	



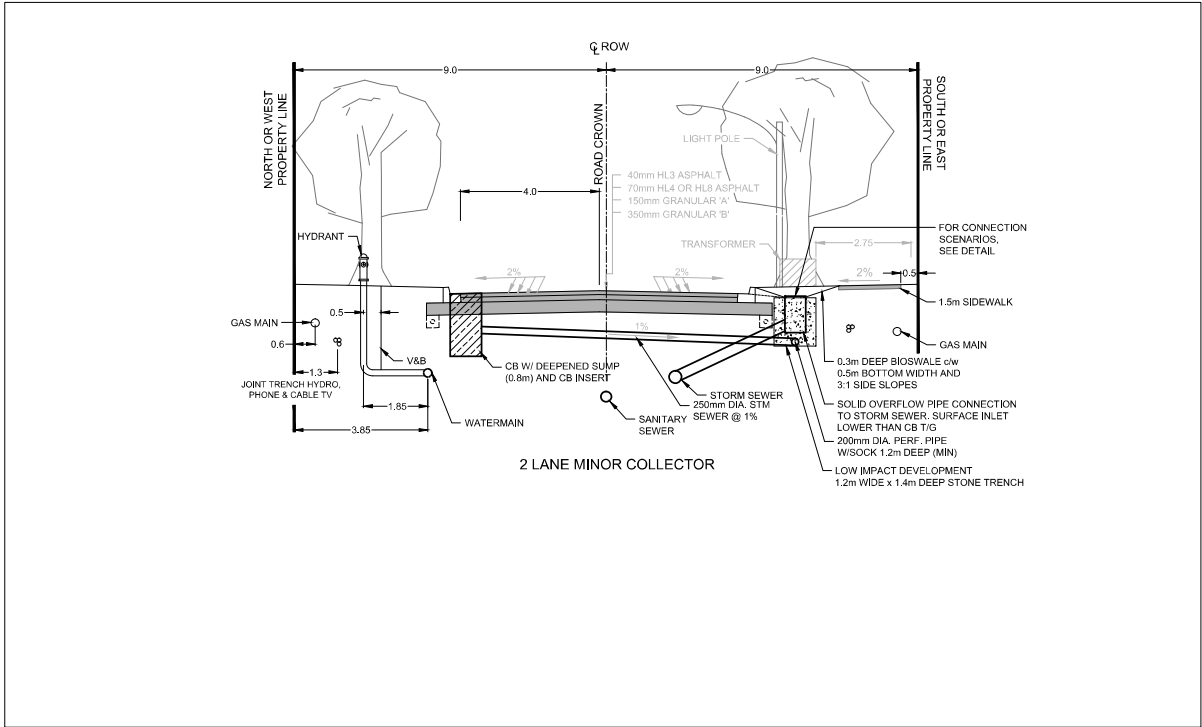
LEGEND

- | | | | |
|--|------------------------------------|--|--|
| | STAKED NHS LIMITS (2015) | | PHASING LIMITS |
| | NHS BUFFER LIMITS | | LIMIT OF HEWITT'S CREEK SECONDARY PLAN |
| | CoB GENERATED BUFFER LIMITS (2013) | | STAKED 2015 NHS LIMITS |
| | 2031 BOUNDARY | | NHS BUFFER LIMITS |
| | DC TRUNK WATERMAIN | | |
| | LOCAL TRUNK WATERMAIN | | |
| | LOCAL WATERMAIN | | |

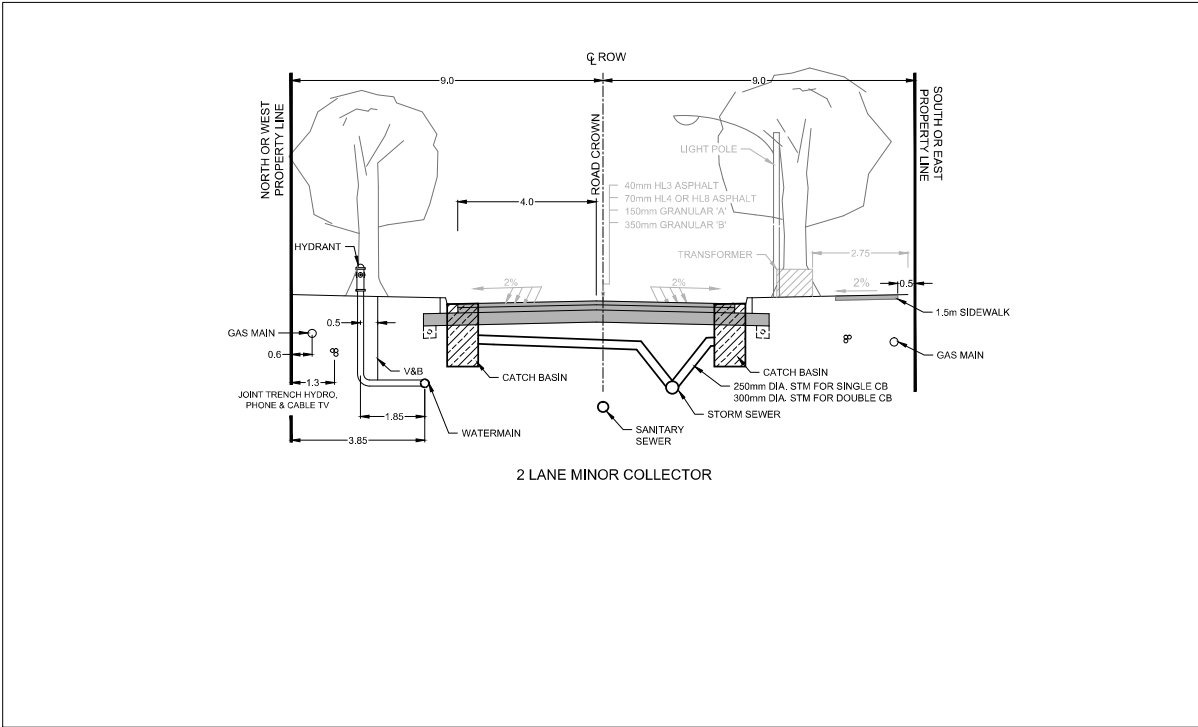


 BURNSIDE		Figure Title		LMB / Blue Sky FSR	
		PRELIMINARY WATER DISTRIBUTION PLAN			
Client	LM BARRIE / BLUE SKY		Drawn	Checked	Date
			BH	CC	
			Scale	Project No.	
H 1:2,500 * V N/A	300038296				

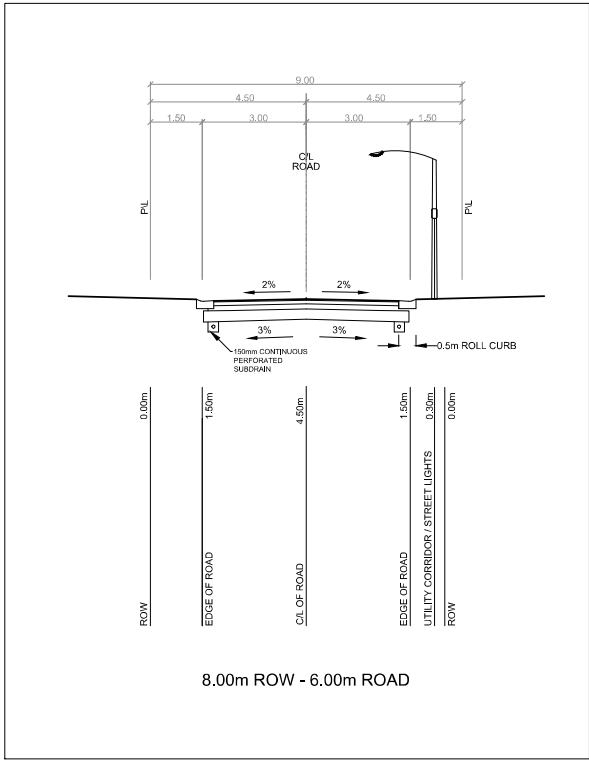
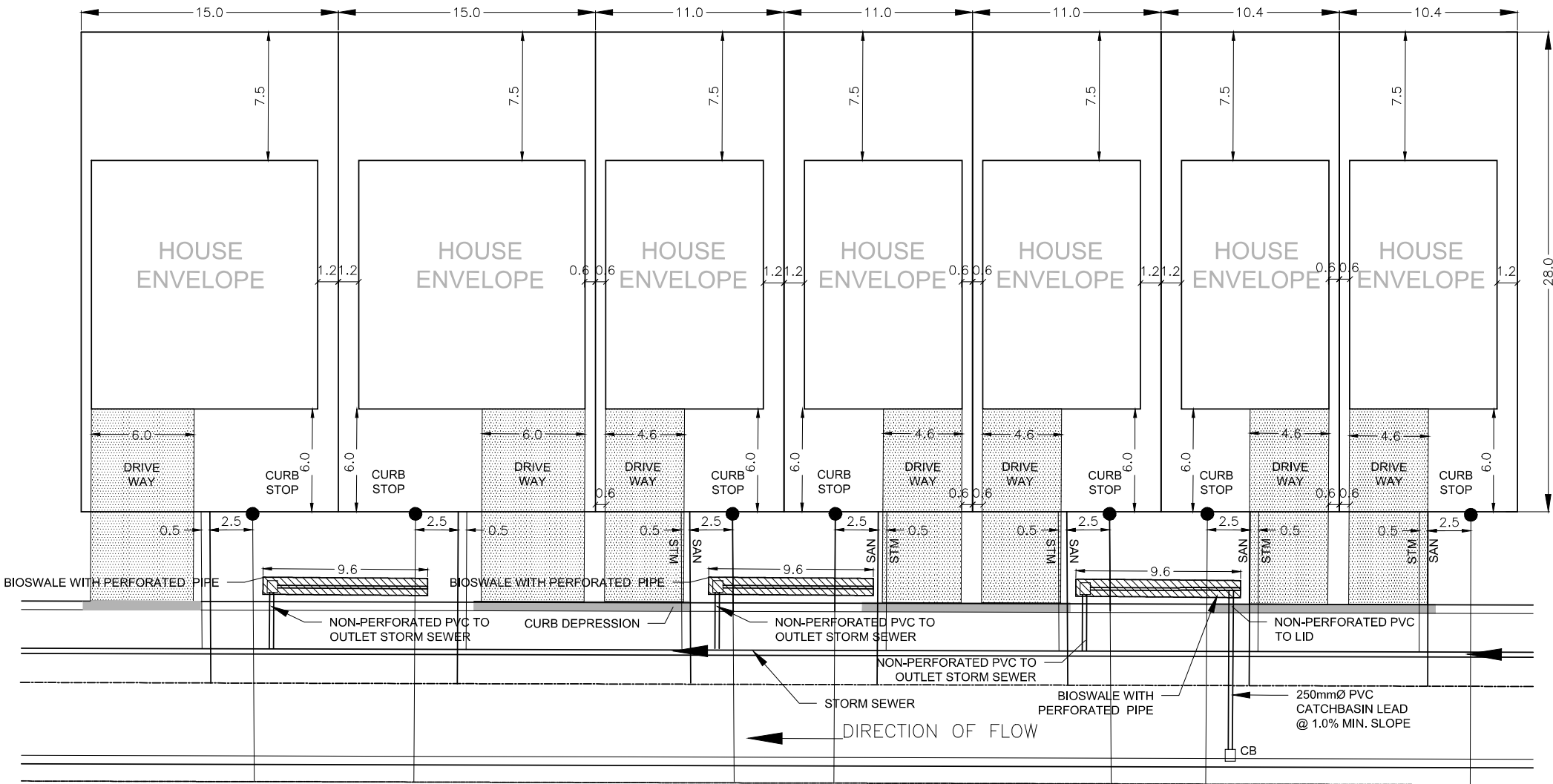
TYPICAL 18m ROW LID CONNECTIONS
SCALE: 1:100

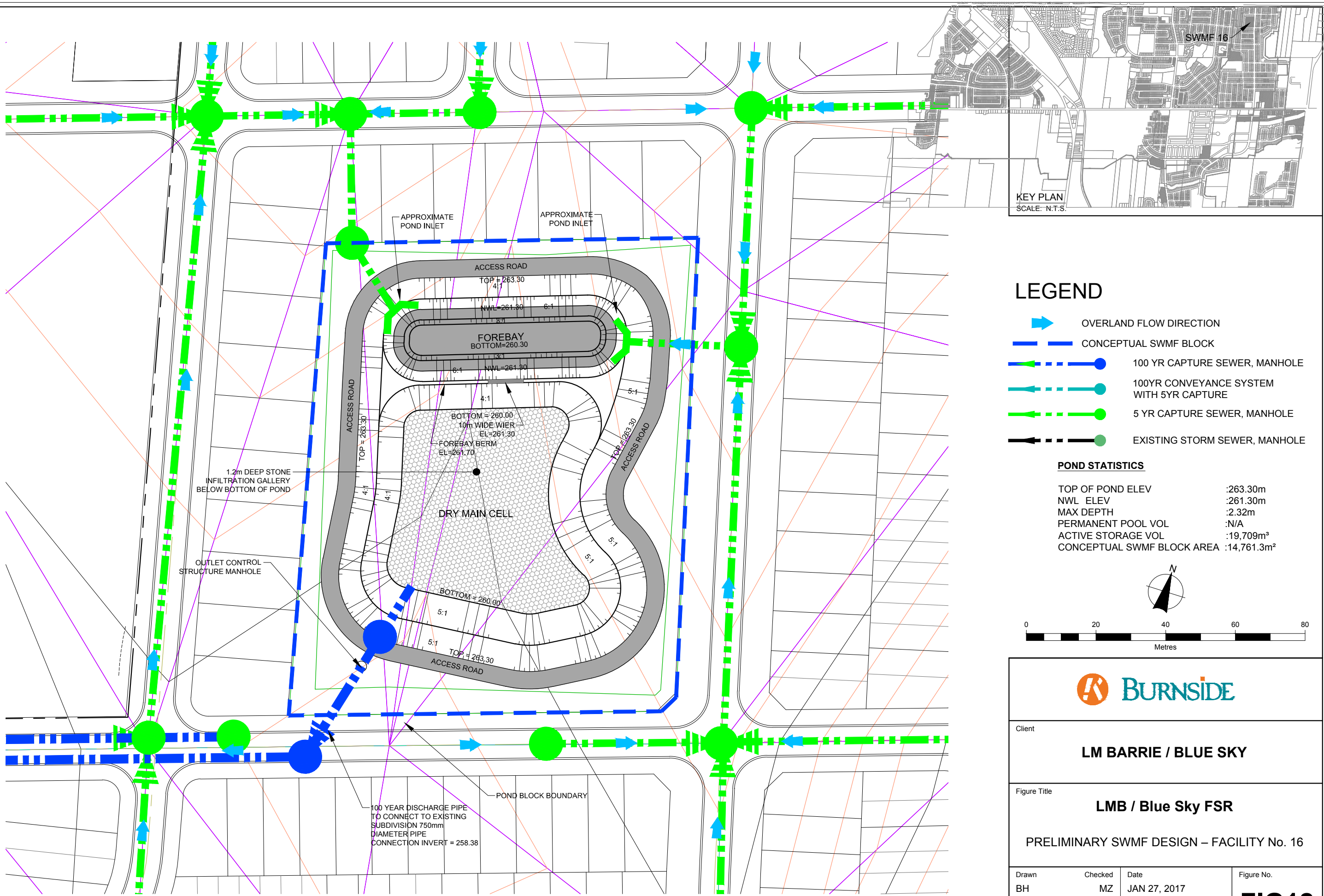


TYPICAL 18m ROW STANDARD CATCHBASIN CONNECTIONS
SCALE: 1:100



TYPICAL 10.4m, 11m AND 15m LOT LID LAYOUT
SCALE: 1:150





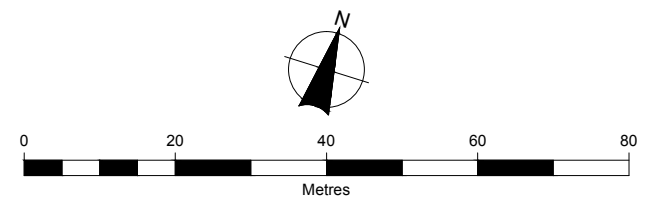
KEY PLAN
SCALE: N.T.S.

LEGEND

- OVERLAND FLOW DIRECTION
- CONCEPTUAL SWMF BLOCK
- 100 YR CAPTURE SEWER, MANHOLE
- 100YR CONVEYANCE SYSTEM WITH 5YR CAPTURE
- 5 YR CAPTURE SEWER, MANHOLE
- EXISTING STORM SEWER, MANHOLE

POND STATISTICS

TOP OF POND ELEV	:263.30m
NWL ELEV	:261.30m
MAX DEPTH	:2.32m
PERMANENT POOL VOL	:N/A
ACTIVE STORAGE VOL	:19,709m³
CONCEPTUAL SWMF BLOCK AREA	:14,761.3m²



Client			
LM BARRIE / BLUE SKY			
Figure Title			
LMB / Blue Sky FSR			
PRELIMINARY SWMF DESIGN – FACILITY No. 16			
Drawn	Checked	Date	Figure No.
BH	MZ	JAN 27, 2017	
Scale		Project No.	
H 1:1,000	V N/A	300039296	FIG12

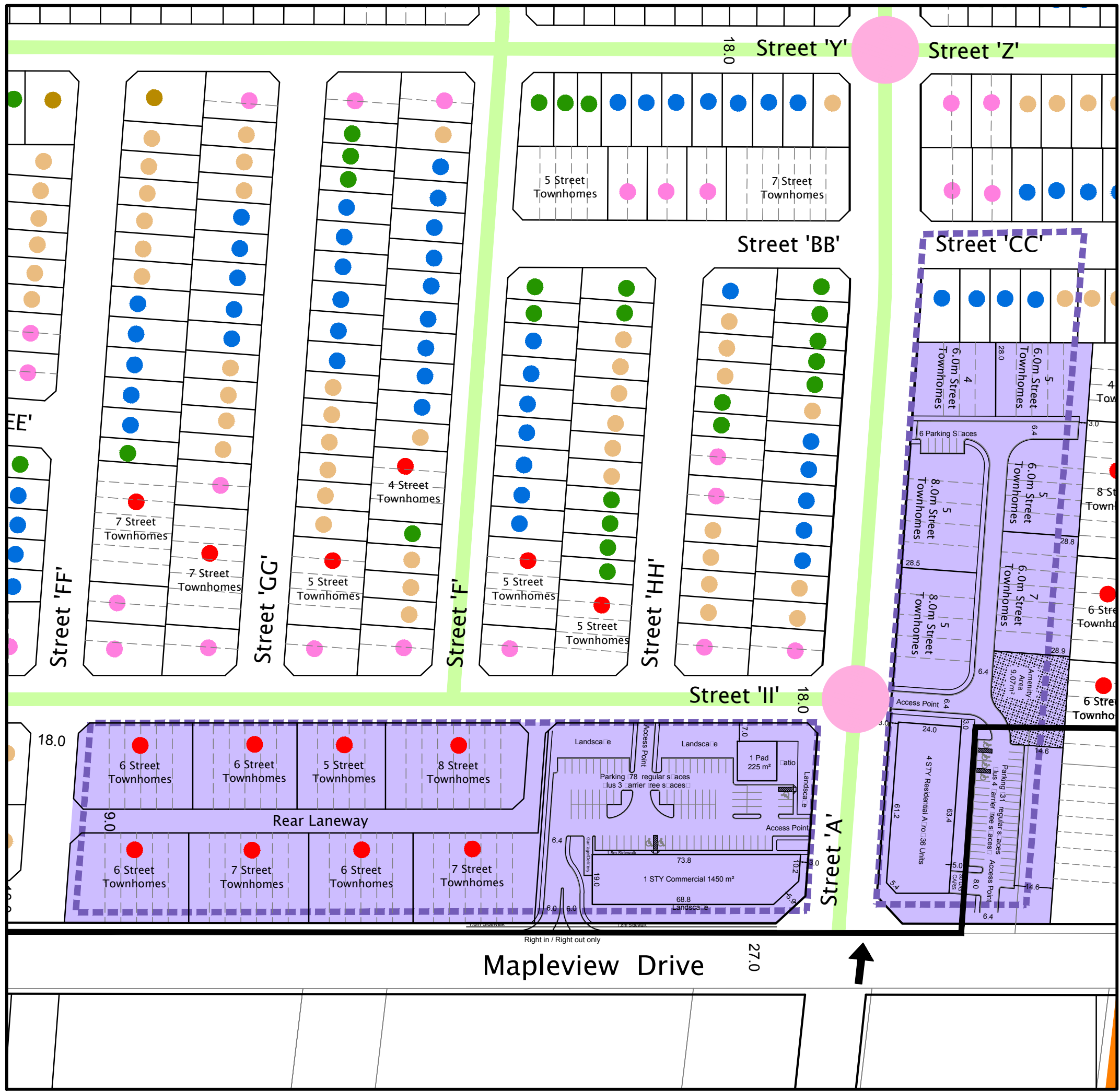


BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]



Drawings



INSET*
SCALE = 1:1500 (A1)

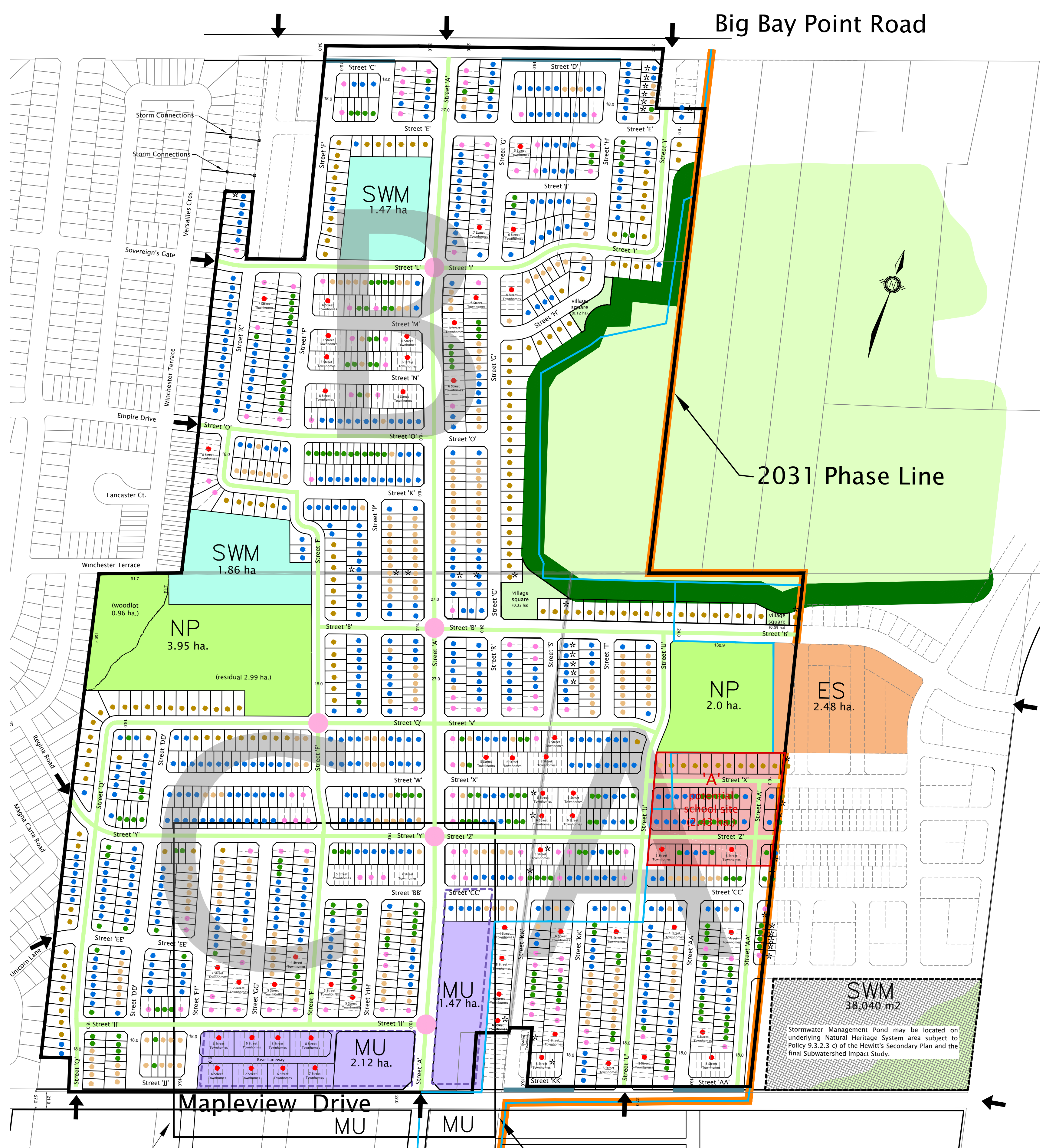
Unit Type	A + B + C	A + B + C	A (21.01 ha.)	B (39.10 ha.)	C (41.31 ha.)
15m Single	8	8.33	151.0	7.26	29
11.5m Single	35	30.51	553.0	25.78	103
10.36m Single	12	14.43	261.5	14.27	57
9.0m Single	8	11.31	205.0	17.02	68
Semi Detached	12	12.25	222.0	11.51	46
Street Townhome	25	19.48	353.0	24.16	96.5
Condo Townhomes (6.0m & 8.0m units)	n/a	1.71	31.0	0.00	0
Condo Apartment (4 Storey)	n/a	1.99	36.0	0.00	0
Totals	100	100.00	1812.5	100	399.5

Calcs	# of units	% of total units	% Goal of # of units
15.0m Single	29	7.26	8
11.5 Single	103	25.78	35
10.36 Single	57	14.27	12
9.0 Single	68	17.02	8
Semi Detached Residential (7.5m/unit)	46	11.51	12
Street Townhouse Residential (6.0m/unit)	96.5	24.16	25
21.01 ha. Total Lands	399.5	100.00	100

Calcs	# of units	% of total units	% Goal of # of units
15.0m Single	64	10.61	8
11.5 Single	197	32.67	35
10.36 Single	89.5	14.84	12
9.0 Single	65.5	10.86	8
Semi Detached Residential (7.5m/unit)	80	13.27	12
Street Townhouse Residential (6.0m/unit)	107	17.74	25
39.10 ha. Total Lands	603	100.00	100

Calcs	# of units	% of total units	% Goal of # of units
15.0m Single	58	7.16	8
11.5 Single	253	31.23	35
10.36 Single	115	14.20	12
9.0 Single	71.5	8.83	8
Semi Detached Residential (7.5m/unit)	96	11.85	12
Street Townhouse Residential (6.0m/unit)	149.5	18.46	25
Condo Townhomes (6.0m and 8.0m units)	31	3.83	
Condo Apartment (4 Storey)	36	4.44	
41.31 ha. Total Lands	810	100.00	100

* Lots with this symbol were counted as half lots only.



Potential School Sites Unit Loss Details

Blue Sky East Site 'A'	
Townhomes	- 11 units
10.36 Single	- 1 units
11.5 Single	- 17 units
15.0 Single	- 10 units
Total Loss	- 39 units

LM BARRIE / BLUE SKY
MAPLEVIEW DRIVE

Conformity Review Plan 4b

Resubmission to
City of Barrie
for conformity review

June 1, 2016

Subject Lands

- Gross Developable 101.42 ha
- Net Developable 93.71 ha

City of Barrie 2031 Limit

City of Barrie Phase 1/3 Limit

Entrance Location

Park/Open Space (6.45 ha.)

Institutional Land Use

Mixed Use Proposed (3.59)

Mixed Use as per City of Barrie Secondary Plan (3.49 ha.)

Stormwater Management Ponds

Natural Heritage 30m Buffer (2.96 ha)

Natural Heritage Core Area (4.75 ha)

Enhanced Landscaping & Dual Sidewalks

Enhanced Window Streets

Key Intersections (Enhanced treatments)

50 0 50 100 150 200 250m

SCALE = 1:3000 (A1)

LM BARRIE / BLUE SKY
MAPLEVIEW DRIVE, BARRIE, ONTARIO

CONFORMITY REVIEW PLAN

DATE ISSUED: June 1, 2016

CHECKED BY: RD

PROJECT NO.: BLU-12169

DRAWN BY: m.c.r.

DRAWING NAME: BLU-12169-CR4b.dwg

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
225 Main Street East, Unit 1, Barrie, Ontario, L4N 0W5
Phone: 705-734-2638 Fax: 705-734-1096
www.jonesconsulting.com

G:\Planning Drawings\BLU-12169\Blue Sky-Big Bay Pt Rd.dwg (Submitted June 2017) BLU-12169-PH-1-DP-1a.dwg Layout:DP Plotted Jun 26, 2017 @ 3:08pm by marichards The Jones Consulting Group Ltd.

OWNERS CERTIFICATE

I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

DATE 1597229 ONTARIO INC.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

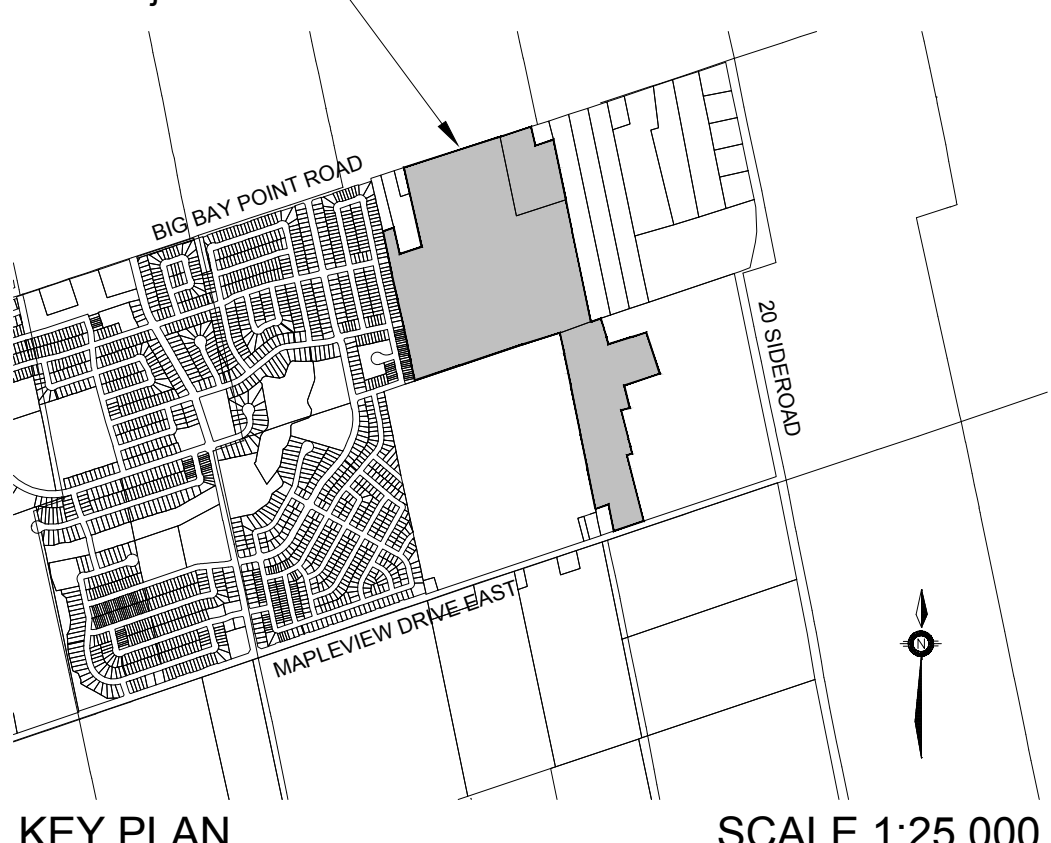
DATE RUDY MAK, O.L.S.
ONTARIO LAND SURVEYORS

STATISTICS

RESIDENTIAL LOT BREAKDOWN

★ 15.0m SINGLES	84 units
■ 11.5m SINGLES	229 units
⊕ 10.36m SINGLES	148 units
▼ 9.0m SINGLES	75 units
• SEMI DETACHED UNITS	92 units
LOTS 1 - 628	
SUB TOTAL	20.56 ha. 628 units
STREET TOWNHOMES 6.0m	
BLOCKS 575 - 593	2.37 ha. 128 units
FUTURE ROADS/LOTS	1.22 ha.
ENVIRONMENTAL PROTECTION	7.23 ha.
BLOCK 629	
OPEN SPACE	2.22 ha.
BLOCKS 630 - 634	
STORMWATER MANAGEMENT	4.25 ha.
BLOCKS 635 - 636	
RESERVES □ WIDENING	0.11 ha.
BLOCKS 637 - 641	
ROADS	12.52 ha.
MAJOR COLLECTOR, STREET A	
MINOR COLLECTOR, STREET B	
LOCAL STREETS C - X	
TOTAL	50.47 ha. 756 units

Subject Lands



ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51.17 OF THE PLANNING ACT

- | | |
|-------------------------------------|--|
| a. SHOWN ON DRAFT PLAN | g. SHOWN ON DRAFT PLAN |
| b. SHOWN ON DRAFT PLAN | h. MUNICIPAL PIPED WATER TO BE PROVIDED |
| c. SHOWN ON KEY PLAN | i. CLAY LOAM |
| d. RESIDENTIAL, OPEN SPACE, EP, SWM | j. SHOWN ON DRAFT PLAN |
| e. SHOWN ON DRAFT PLAN | k. ALL MUNICIPAL SERVICES TO BE PROVIDED |
| f. SHOWN ON DRAFT PLAN | l. SHOWN ON DRAFT PLAN |

Draft Plan of Subdivision

Part of Lot 19, and Part of Lot 20, Concession 12
Former Township of Innisfil,
Now in the

City of Barrie

2017



SCALE = 1:2000 (A1)

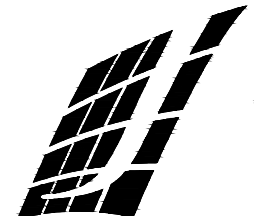
SCHEDULE OF REVISIONS		
DATE	DESCRIPTION	DRAWN

BLUE SKY - PHASE 1

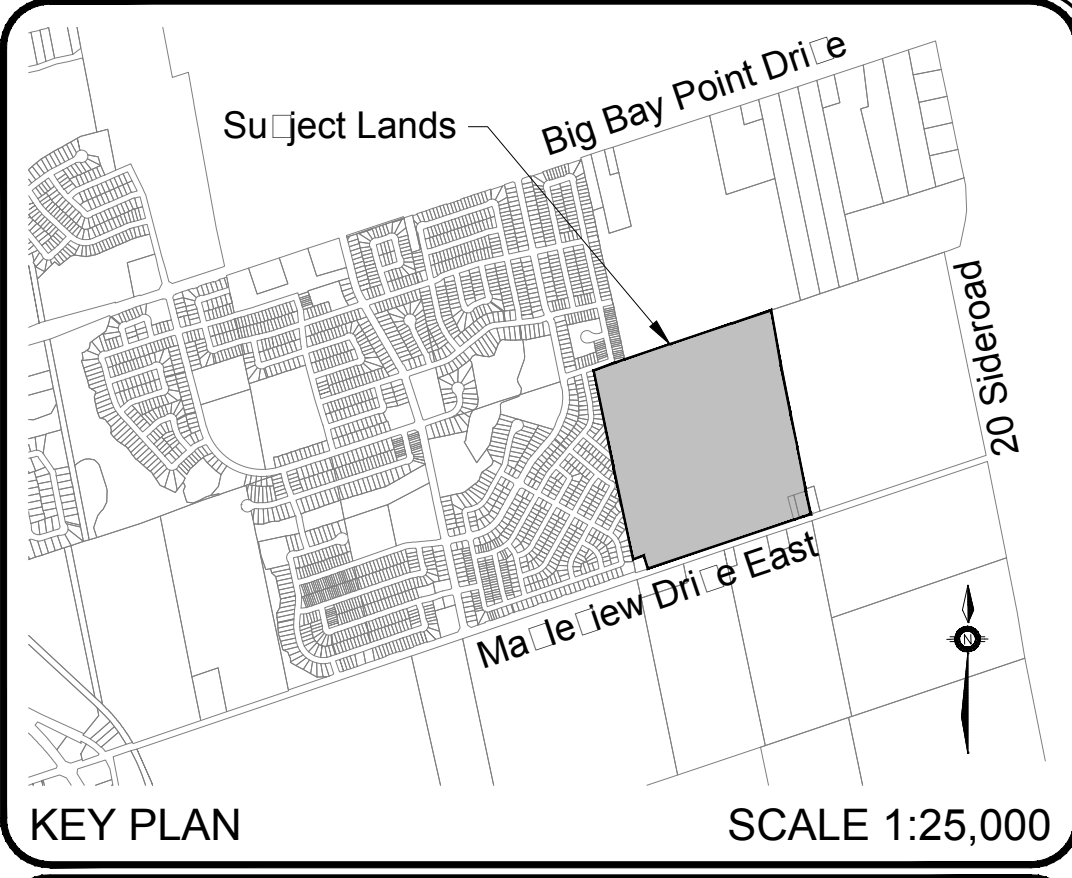
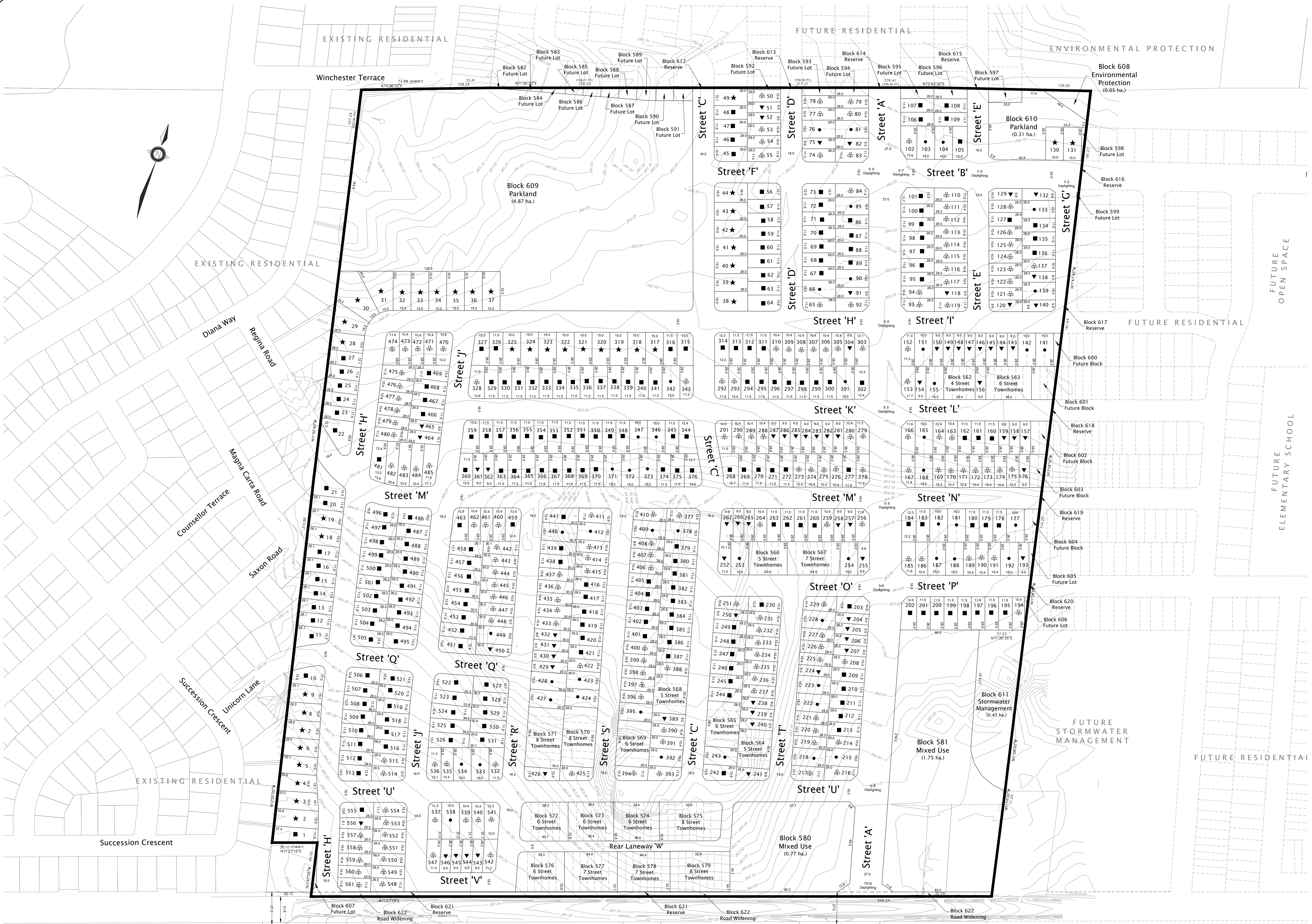
DRAFT PLAN OF SUBDIVISION



Date Issued: JUNE 26, 2017
Checked By: RD
Project No.: BLU-12169
Drawn By: m.c.r.
Drawing Name: BLU-12169-PH-1-DP-1a.dwg



JONES
CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Main Street East, Unit 1, Barrie, Ontario, L4N 0W5
Phone: 705-734-2538
www.jonesconsulting.com Fax: 705-734-1056



Draft Plan of Subdivision
Part of Lot 19, Concession 12
City of Barrie
2017

OWNER'S CERTIFICATE
I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

DATE _____ LM BARRIE HOLDINGS INC.

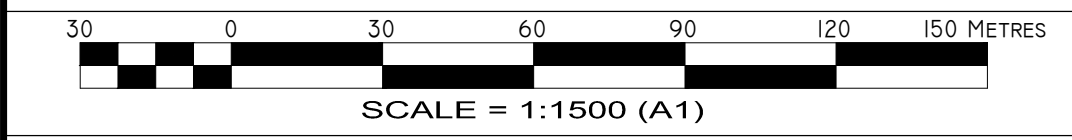
DATE _____ 2121191 ONTARIO INC.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE _____ RUDY MAK, O.L.S.
ONTARIO LAND SURVEYORS

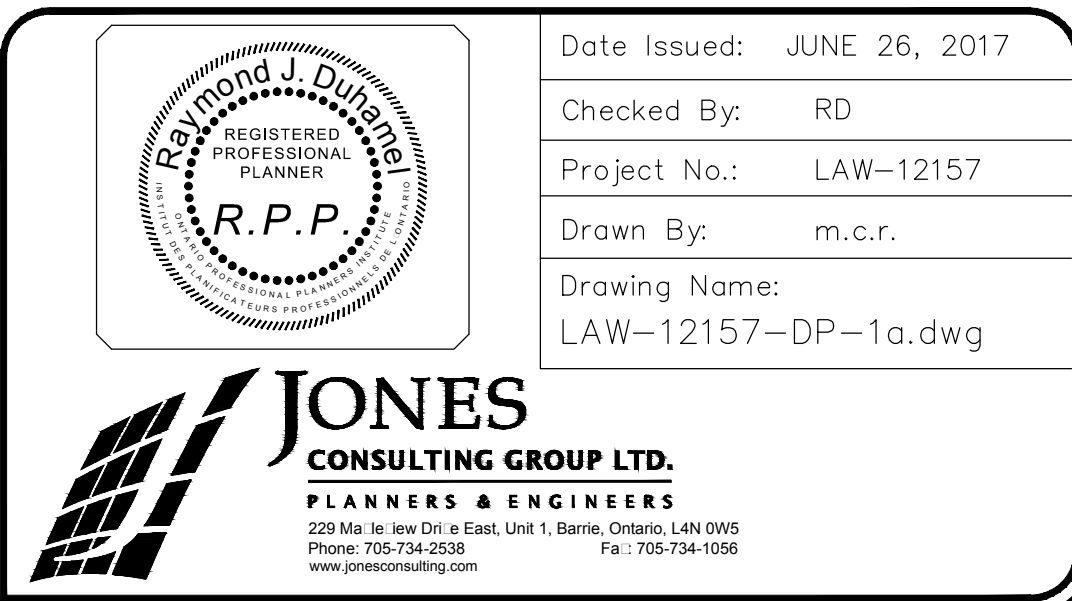
ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51.17 OF THE PLANNING ACT
a: SHOWN ON DRAFT PLAN
b: SHOWN ON DRAFT PLAN
c: SHOWN ON KEY PLAN
d: RESIDENTIAL, SWM, EP
e: SHOWN ON DRAFT PLAN
f: SHOWN ON DRAFT PLAN
g: SHOWN ON DRAFT PLAN
h: MUNICIPAL PIPED WATER TO BE PROVIDED
i: SANDY CLAY LOAM
j: SHOWN ON DRAFT PLAN
k: ALL MUNICIPAL SERVICES TO BE PROVIDED
l: SHOWN ON DRAFT PLAN

STATISTICS		
RESIDENTIAL LOT BREAKDOWN		
★ 15.0m SINGLES	39 units	
■ 11.5m SINGLES	235 units	
⊕ 10.36m SINGLES	170 units	
▼ 9.0m SINGLES	67 units	
● SEMI DETACHED UNITS	100 units	
(LOTS 1 - 561)		
SUB TOTAL	17.99 ha.	611 units
STREET TOWNHOMES 6.0m	1.09 ha.	60 units
(BLOCKS 562 - 571)		
MIXED USE	3.67 ha.	121 units
(BLOCKS 572 - 581)		
FUTURE LOTS	0.45 ha.	
(BLOCKS 580 - 607)		
ENVIRONMENTAL PROTECTION	0.05 ha.	
(BLOCK 608)		
OPEN SPACE	5.18 ha.	
(BLOCK 611)		
STORM WATER MANAGEMENT	0.43 ha.	
(BLOCK 611)		
RESERVES - WIDENING	0.22 ha.	
(BLOCKS 612 - 622)		
ROADS	11.73 ha.	
(MAJOR COLLECTOR, STREET A MINOR COLLECTOR, STREET B LOCAL STREETS C - V REAR LANEWAY W)		
TOTAL	40.81 ha.	792 units



LM BARRIE
DRAFT PLAN OF SUBDIVISION

Date Issued: JUNE 26, 2017
Checked By: RD
Project No.: LAW-12157
Drawn By: m.c.r.
Drawing Name: LAW-12157-DP-1a.dwg



JONES CONSULTING GROUP LTD.
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Phone: 705-734-2538 Fax: 705-734-1056
www.jonesconsulting.com

LM BARRIE
CITY OF BARRIE



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Preliminary Geotechnical Investigation, Golder & Associates (December 2016)



December 2016

PRELIMINARY GEOTECHNICAL INVESTIGATION

LM Bluesky Proposed Residential Development Barrie, Ontario

Submitted to:

LM Barrie / Blue Sky
67 Barre Drive
Barrie Ontario
L4N 7P1

REPORT

Report Number: 1661309

Distribution:

1 e-Copy - RJ Burnside
1 e-Copy - Golder Associates Ltd.





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PRELIMINARY GEOTECHNICAL INVESTIGATION LM BLUESKY - PROPOSED RESIDENTIAL DEVELOPMENT, BARRIE, ONTARIO

ATTACHMENTS:

Important Information and Limitations of This Report
Method of Soil Classification
Abbreviations and Terms Used on Records of Boreholes and Test Pits
List of Symbols

FIGURES

Figure 1 – Borehole Location Plan

APPENDICES

APPENDIX A

Record of Borehole Sheets

APPENDIX B

Laboratory Test Results

APPENDIX C

Analytical Laboratory Results



PRELIMINARY GEOTECHNICAL INVESTIGATION LM BLUESKY - PROPOSED RESIDENTIAL DEVELOPMENT, BARRIE, ONTARIO

1.0 INTRODUCTION

Golder Associates Ltd. (Golder) was retained by LM Barrie Holdings Inc. / 2121191 Ontario Inc. (LM Barrie) and 1597229 Ontario Limited (Blue Sky) to provide geotechnical engineering services in support of the design of a residential development, in the City of Barrie, Ontario. The location of the site is shown on Figure 1.

The purpose of this report is to summarize the geotechnical information (soil and groundwater) encountered in this area and to provide preliminary recommendations and comments on the geotechnical aspects of the design and construction of the proposed development.

This report should be read in conjunction with the "Important Information and Limitations of this Report", attached. The reader's attention is specifically drawn to this information, as it is essential for the proper use and interpretation of this report.

2.0 PROJECT BACKGROUND

The site is located between Big Bay Point Road and Maplevue Drive East and is about 250 m west of 20th Sideroad. The site is bound to the west by an existing residential development; agricultural fields lie to the east. The current land use is agricultural. The site is generally flat and is about 101.3 hectares.

Based on the conceptual site plan provided to Golder dated October 5, 2015, the site will comprise residential lots and mixed use areas, including a 4 storey apartment, as well as two Storm Water Management (SWM) Ponds. An additional SWM Pond will be constructed beyond the current site boundaries adjacent to the southeast corner of the site, west of 20th Sideroad. Servicing will be completed along both Maplevue Drive East and Big Bay Point Road as part of the development. The plan also includes development of the associated roadways and underground municipal services.

3.0 INVESTIGATION PROCEDURES

3.1 Field Investigation

The field investigation was completed between October 3, 2016 and October 17, 2016 during which time a total of forty-two boreholes were advanced at the site; the boreholes are designated as Boreholes 16-01 to 16-42. Seven boreholes (BH16-1 to 16-3 and 16-36 to 16-39) were advanced within the right-of-way of Big Bay Point Road and Maplevue Drive East. The boreholes were advanced to depths between about 2.0 m and 12.7 m below existing site grades. The shallow groundwater conditions were noted in the open boreholes during drilling. Seven monitoring wells were installed in selected boreholes (16-06, 16-14, 16-16, 16-21, 16-28, 16-30, and 16-40) and were equipped with protective casings to allow for subsequent monitoring of the groundwater levels at the site. The borehole and monitoring well locations are indicated on site and in the Borehole Location Plan, (Figure 1).

The boreholes were drilled using truck and track-mounted drill rigs, supplied and operated by a specialist drilling company. Standard penetration testing (ASTM D1586) and sampling were carried out at regular intervals of depth in the boreholes using conventional 38 mm internal diameter split spoon sampling equipment in the overburden soils.

The field work was observed by members of Golder's technical staff, who located the boreholes, arranged for the clearance of underground utility services, observed the drilling, performed sampling and in situ testing operations, logged the boreholes, and examined and cared for recovered soil samples. The samples were identified in the field, placed in appropriate containers, labelled and transported to Golder's Barrie geotechnical laboratory for



PRELIMINARY GEOTECHNICAL INVESTIGATION LM BLUESKY - PROPOSED RESIDENTIAL DEVELOPMENT, BARRIE, ONTARIO

further examination and laboratory testing. Index and classification testing, consisting of grain size distribution testing, was carried out on selected soil samples and various moisture contents.

The borehole locations were staked out in the field by Golder personnel prior to the drilling operations. A licensed surveyor retained by LM Barrie / Blue Sky surveyed the borehole locations and ground elevations following completion of the field investigation.

4.0 SUBSURFACE CONDITIONS

The detailed subsurface soil/bedrock and groundwater conditions encountered in the boreholes advanced at this site along with the results of geotechnical laboratory testing, are shown on the Record of Borehole sheets in Appendix A. Methods of Soil Classification, Symbols and Terms used on Records of Boreholes and Test Pits are provided to assist in the interpretation of the Record of Borehole sheets. The detailed results of geotechnical laboratory testing on selected soil samples are presented in Appendix B.

The Record of Borehole sheets indicate the subsurface conditions at the borehole locations only. The stratigraphic boundaries shown on the borehole records are inferred from non-continuous sampling, observations of drilling progress as well as results of Standard Penetration Tests and, therefore, represent transitions between soil types rather than exact planes of geological change. Subsurface soil conditions will vary between and beyond the borehole locations.

The following sections of this report provide an overview of the subsurface conditions encountered at the site followed by more detailed descriptions of the major soil strata and shallow groundwater conditions encountered at the borehole locations.

4.1 General Overview

In general, the subsurface stratigraphy within the area of the investigation consists of topsoil overlying interlayers of silty sand, sand, sand and silt, silt and glacial till, varying in gradation from sandy silt to clayey sand. Minor deposits of cohesive material were also encountered above the till, throughout the site. Fill was encountered in the boreholes advanced along Maplevue Drive East and Big Bay Point Road.

Groundwater was measured at the site in the monitoring wells at depths as high as 2.4 m below existing site grades.

4.1.1 Topsoil

Topsoil was encountered in each of the boreholes advanced within the property boundary. The topsoil ranged in thickness between 30 mm and 460 mm. The thickness of the topsoil at the site based on the borehole records should be considered preliminary only, and a subsequent shallow test pit investigation should be completed to more accurately define the topsoil thicknesses across the site.

4.1.2 Fill

Fill was encountered within the boreholes advanced along Maplevue Drive East and Big Bay Point Road. The fill ranged in thickness between 0.6 m and 1.4 m. The fill was variable and ranged from gravelly sand (as part of the roadway shoulder) to sand to sandy silt. The fill was brown and the water content in the fill was dry to moist.

The measured SPT "N"-values in the fill ranged from 2 blows per 0.3 m of penetration to 26 blows per 0.3 m of penetration indicating that these soils are very loose to compact.



The natural water content of the fill ranges from 4 percent to 20 percent.

4.1.3 Sand and Gravelly Sand to Sand and Silt

Variable, extensive non-cohesive deposits were encountered in the majority of the boreholes advanced at the site. The non-cohesive deposits were primarily sands but ranged from gravelly sand to sand to sand and silt and were interlayered with both the minor cohesive deposits and the glacial till. The non-cohesive deposits were generally brown to grey and moist to wet. The majority of the boreholes advanced at the site, excluding Boreholes 16-01, 16-23, 16-24, 16-29, 16-37, and 16-42, were terminated within the non-cohesive deposits at a maximum depth of 12.6 m below existing site grades.

The measured SPT “N”-values in the non-cohesive deposits ranged from 1 blow per 0.3 m of penetration to greater than 50 blows per 0.3 m of penetration indicating that these soils are very loose to very dense; however the soils are typically in the compact range.

The natural water content of the non-cohesive deposits ranges from 1 percent to 27 percent.

The results of grain size distribution tests completed on seven selected samples of the non-cohesive deposits are shown on Figures B1, B2 and B3.

4.1.4 Clayey Silt to Silty Clay

A cohesive clayey silt to silty clay deposit was encountered in Boreholes 16-06, 16-08, 16-11, 16-18, 16-22, 16-37, 16-39 and 16-42. The cohesive deposits were encountered interlayered with the non-cohesive deposits and the till. The cohesive deposit is brown to grey and contained variable amounts of sand. The in-situ water content is at or below the estimated plastic limit, based on field analysis. Boreholes 16-37 and 16-42 were terminated in the clayey silt to silty clay deposit at a maximum depth of 8.1 m below existing site grades.

The measured SPT “N”-values within the cohesive till deposit range from 5 blows per 0.3 m of penetration to greater than 34 blows per 0.3 m of penetration, suggestive of a firm to hard consistency.

The natural water content of the clayey silt to silty clay deposit ranges from 17 percent to 41 percent.

The results of grain size distribution tests completed on three selected samples of the cohesive deposits are shown on Figure B4. Atterberg Limits testing carried out on three selected samples of silty clay measured plastic limits ranging between 17 and 24 percent, liquid limits ranging between 41 and 51 percent and plasticity indices ranging between 24 and 27. These results, which are plotted on the plasticity chart on Figure B5, indicate that the silty clay was of intermediate to high plasticity.

4.1.5 Glacial Till

A variable glacial till deposit was encountered in several of the boreholes; the till deposit typically ranges from a non-cohesive sandy silt to silty sand till to a cohesive clayey sand till. The tills are brown to grey and have a variable gravel content.

The non-cohesive till is generally dry to moist; the water content of the cohesive till is at or below the estimated plastic limit, based on field analysis. Boreholes 16-01, 16-23, 16-24 and 16-29 were terminated in the till deposit at a maximum depth of 8.1 m below existing site grades.



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The measured SPT “N”-values within the non-cohesive till range from 7 blows per 0.3 m of penetration to greater than 50 blows per 0.3 m of penetration, indicating this deposit is loose to very dense; however the majority of the “N”-values are greater than 10 blows for 0.3 m of penetration and therefore the deposit is considered to be generally compact. The measured SPT “N”-values within the cohesive till deposit range from 9 blows per 0.3 m of penetration to greater than 50 blows per 0.3 m of penetration, suggestive of a stiff to hard consistency.

The natural water content of the non-cohesive till deposit ranges from 7 percent to 23 percent. The natural water content of the cohesive till deposit ranges from 7 percent to 27 percent.

The results of grain size distribution tests completed on five selected samples of the cohesive till deposit are shown on Figure B6. Atterberg Limits testing carried out on four selected samples of the clayey sand till deposit measured plastic limits between 10 and 1 percent, liquid limits between 14 and 15 percent and plasticity indices between 3 and 5 percent. These results, which are plotted on the plasticity chart on Figure B7, indicate that the fines portion of the cohesive glacial till is comprised of clayey silt to silty clay of low plasticity.

Glacial till deposits in Ontario are known to contain cobbles and boulders; as such, these materials are anticipated to be present throughout the till deposits at this site.

4.2 Groundwater Conditions

The shallow groundwater conditions encountered during this investigation and monitoring well installation details are presented on the Record of Borehole sheets in Appendix A. Monitoring wells were installed in Boreholes 16-06, 16-14, 16-16, 16-21, 16-28, 16-30, and 16-40. The detailed groundwater levels measured in the monitoring wells installed at the site, are summarized in the following table:

Borehole No.	Groundwater Depth / Elevation On Completion		Groundwater Depth / Elevation On November 9, 2016	
	Depth below Existing Grade (m)	Elevation (m)	Depth below Existing Grade (m)	Elevation (m)
16-01	Dry	< 257.9	--	--
16-02	Dry	< 258.8	--	--
16-03	Dry	< 261.4	--	--
16-04	Dry	< 255.9	--	--
16-05	Dry	< 256.5	--	--
16-06	12.0	251.8	Dry	< 251.2
16-07	5.6	260.4	--	--
16-08	Dry	< 257.0	--	--
16-09	Dry	< 260.4	--	--
16-10	Dry	< 260.0	--	--
16-11	Dry	< 256.8	--	--
16-12	8.4	252.4	--	--
16-13	Dry	< 259.0	--	--
16-14	6.1	254.2	5.9	254.4
16-15	Dry	< 255.6	--	--



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Borehole No.	Groundwater Depth / Elevation On Completion		Groundwater Depth / Elevation On November 9, 2016	
	Depth below Existing Grade (m)	Elevation (m)	Depth below Existing Grade (m)	Elevation (m)
16-16	Dry	< 252.5	Dry	< 252.5
16-17	Dry	< 255.9	--	--
16-18	Dry	< 255.8	--	--
16-19	Dry	< 254.8	--	--
16-20	Dry	< 257.0	--	--
16-21	Dry	< 254.4	Dry	< 254.4
16-22	Dry	< 254.6	--	--
16-23	Dry	< 255.2	--	--
16-24	Dry	< 258.9	--	--
16-25	Dry	< 258.2	--	--
16-26	Dry	< 253.1	--	--
16-27	7.0	252.5	--	--
16-28	5.8	255.0	5.6	255.2
16-29	Dry	< 257.9	--	--
16-30	8.5	254.3	8.0	254.8
16-31	6.8	254.6	--	--
16-32	8.5	253.9	--	--
16-33	Dry	< 254.3	--	--
16-34	5.6	254.4	--	--
16-35	5.5	252.8	--	--
16-36	6.7	254.6	--	--
16-37	5.3	254.0	--	--
16-38	5.9	**	--	--
16-39	5.0	254.6	--	--
16-40	5.7	247.6	2.4	250.9
16-41	Dry	< 258.4	--	--
16-42	Dry	< 256.2	--	--

** Borehole elevation / location not surveyed

It should be noted that the groundwater levels at the site are anticipated to fluctuate with seasonal variations in precipitation and runoff.

5.0 GEOTECHNICAL COMMENTS AND RECOMMENDATIONS

This section of the report provides preliminary engineering information regarding geotechnical aspects of the proposed residential development at the above noted site, based on interpretation of the factual data obtained from the boreholes advanced at the site and our understanding of the project requirements. The preliminary information in this portion of the report is provided for the guidance of the design engineers and professionals.



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Where comments are made on construction, they are provided in order to highlight those aspects which could affect the design of the project. Contractors bidding on or undertaking any work at the site should examine the factual results of the investigation, satisfy themselves as to the adequacy of the information for construction and make their own interpretation of the factual information provided as it may affect equipment selection, proposed construction methods, scheduling and the like.

5.1 Subsurface Conditions Summary

As noted above, the subsurface stratigraphy within the area of the investigation generally consists of topsoil overlying interlayered deposits of very loose to very dense, but generally compact non-cohesive materials which were interlayered with both firm to hard cohesive deposits and compact / stiff to hard glacial till deposits. Groundwater was measured at the site in the monitoring wells at depths as high as 2.4 m below existing site grades.

Overall from a geotechnical perspective, the site is considered suitable to support the proposed residential development. It is noted that, once the development concept is finalized, a more detailed site specific investigation will likely be required to address the specific needs of the various components of the development.

5.2 General Site Grading

Based on the conceptual site plan provided to Golder, the site will comprise residential lots and mixed use areas (including a four storey apartment), as well as two Storm Water Management (SWM) Ponds. An additional SWM Pond will be constructed beyond the current site boundaries adjacent to the southeast corner of the site, west of 20th Sideroad. The plan also includes development of the associated roadways and underground municipal services. Servicing will be completed along both Maplevue Drive East and Big Bay Point Road as part of the development.

At the time of this investigation the details of site grading were not yet available; however, it is anticipated, as the site is relatively flat, that minor regrading (less than 1.0 m) will be required as part of the redevelopment. As such, post construction settlement is not anticipated to be a concern; however, it is recommended that Golder review the site grading drawings when available to provide additional input toward potential post-construction settlement.

It is assumed that the structures which currently exist at the site will be demolished with the debris removed from the site. It is essential that all subsurface building materials associated with the previous structures be removed (i.e., footings, foundation walls, etc.). Following removal of these materials, engineered fill placement will be required in these areas. Additional information regarding engineered fill placement is provided below.

5.2.1 Site Preparation and Engineered Fill

In general, the existing site vegetation, surficial topsoil/organics materials and other near surface soils containing significant amounts of organic matter are not considered to be suitable for the subgrade support of building foundations, floor slabs, or other settlement sensitive structures or engineered fill materials that support these structures and should be completely stripped from the site prior to placing any engineered fill.

Following the stripping of the topsoil and soils containing significant amounts of organics and/or soft/disturbed surficial soils, the exposed subgrade materials should be heavily proof-rolled in conjunction with an inspection by qualified geotechnical personnel to confirm that the exposed soils are native, undisturbed and competent, and have been adequately cleaned of ponded water and all disturbed, loosened, softened, organic and other



deleterious material. Remedial work (i.e., further sub-excavation and replacement) should be carried out on poorly performing areas identified during the proofrolling activities as directed by geotechnical personnel.

5.2.2 Engineered Fill Requirements

As described above, the anticipated site grading activities include both minor lowering and raising the original grade to meet the final design site grades. In general, the soils within cut areas will primarily consist of non-cohesive and cohesive deposits, as well as glacial till deposits. As the natural water content is generally below the optimum water content for compaction, wetting of these materials may be necessary prior to their reuse as engineered fill. Care must be taken to ensure that the placement and compaction of the engineered fill is completed during optimal working conditions (i.e., during the summer).

If importation of material is required for the engineered fill process, the material that is proposed for use as engineered fill should be approved by the geotechnical engineer at its source, prior to importing the material to the site. Suitable soils, free of topsoil, organic matter or other deleterious materials can be used as engineered fill provided that the water content of the soil at the time of placement does not vary more than two per cent above or below its optimum water content for compaction. Otherwise, the soils may require treatment (i.e., drying or wetting) prior to placement.

Following the inspection and approval of the subgrade as described previously in this report, engineered fill materials should be placed in maximum 0.3 m thick loose lifts and uniformly compacted to 98 percent of the Standard Proctor maximum dry density (SPMDD). Filling should continue until the design subgrade elevations are achieved. The top of the engineered fill should extend a minimum of 1.0 m above the founding levels for all of the structures.

Full-time monitoring and in-situ density testing should be carried out by a qualified geotechnical engineering firm during placement of engineered fill beneath all structures and settlement sensitive areas.

The final surface of the engineered fill must be protected as necessary from construction traffic, and should be sloped to provide positive drainage for surface water during the construction period. If the engineered fill materials will be left exposed (i.e., uncovered) during periods of freezing weather, additional soil cover should be placed to provide for frost protection. Prior to placing the subbase and/or base courses within pavement areas, the surface of the engineered fill should be inspected by the geotechnical engineer.

Engineered fill materials should not be placed during winter/periods of freezing weather.

5.3 Foundation Recommendations

In regard to the residential structures, for preliminary assessment purposes, conventional spread and strip footings foundations for lightly loaded to moderately loaded structures on the competent native soils may be designed using a factored geotechnical resistance at Ultimate Limit States (ULS) of 225 kPa and a geotechnical resistance at Serviceability Limit States (SLS) of 150 kPa (assuming 25 mm of settlement).

For footings founded on engineered fill, a factored geotechnical resistance at ULS of 150 kPa and a geotechnical resistance at SLS of 100 kPa (assuming 25 mm of settlement) may be used.

The above bearing pressures assume a minimum strip footing width of 0.45 m, and a minimum column spread footing dimension of 1 m.



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Preliminary geotechnical resistances for the proposed four storey condominium apartment building is provided below. It is noted that the depth of excavation (levels of underground parking) is not known at this time; for preliminary analysis we have assumed that one level of underground parking will be required (i.e., minimum excavation depth of about 4.5 mbg).

Area	Borehole	Minimum Founding Depth Below Existing Ground Surface (m)	Preliminary Factored Geotechnical Resistance at ULS (kPa)	Preliminary Geotechnical Resistance at SLS (for 25 mm of Settlement) (kPa)
Four-storey apartment	16-32	4.5	350	250

The above ULS and SLS resistances are suitable for strip footings up to 1.5 m wide and square pad/spread footings with dimension of up to 1.5 m in width by 1.5 m in length.

As noted above, the number of levels of underground parking is not known. As such, the geotechnical resistances provided above should be re-assessed during the detail design stage once the number of levels of underground parking and the foundation design is known.

All exterior foundations and foundations in unheated areas must be provided with at least 1.5 m of earth cover for frost protection purposes. In addition, the bearing soil and fresh concrete must be protected from freezing during cold weather construction. **All founding subgrade soils should be inspected by Golder prior to the foundation construction.** Any soft, loose, or disturbed soils encountered at the founding level should be removed and backfilled with compacted granular materials. Concrete for the foundations should be placed immediately following the cleaning and inspection of the foundation subgrade (i.e., engineered fill or native soils). If concrete cannot be placed immediately following preparation and cleaning of the subgrade, the integrity of the bearing stratum should be protected by placement of a layer of lean concrete immediately following inspection of the foundation subgrade by Golder.

If stepped spread footings are constructed, the difference in elevation between individual footings should not be greater than one half the clear distance between the footings. In addition, the lower footings should be constructed first so that if it is necessary to construct the lower footings at a greater depth than anticipated, the elevations of the upper footings can be adjusted accordingly. Stepped strip footings should be constructed in accordance with OBC Section 9.15.3.9.

The maximum total and differential settlements are expected to be less than 25 mm and 20 mm, respectively, for foundations designed, constructed and inspected as outlined above.

5.4 Lateral Earth Pressure on Walls

The exterior foundation walls, as well as any retaining structures, should be backfilled with compacted granular fill materials. A suitable drainage system should be incorporated into the design to allow for the collection and discharge of water that may enter the backfill zone. As a minimum requirement, the granular backfill should be placed in the wedge-shaped zone defined by a 60 degree line extending up and back from the base of the structures. All granular backfill should be placed in maximum 200 mm loose lifts and uniformly compacted to at least 98 percent of the material's Standard Proctor Maximum Dry Density (SPMDD). Heavy compaction



equipment should not be used within the lateral distance behind any structure equal to the current height of the fill above the base of the structure.

The structures should be designed to withstand both lateral earth and groundwater pressures. Provided that the excavation is backfilled as described above, the structures may be designed using a triangular earth pressure distribution, an at-rest earth pressure coefficient of 0.5 and a soil unit weight of 19 kN/m^3 .

5.5 Site Servicing

5.5.1 Excavations

At the time of this report, preliminary excavation depths for site services, have been provided for a portion of the site and range between 2.5 m to 8.1 m below existing site grades.

The founding soils for site services at these depths are anticipated to consist primarily of either the glacial till deposits or the non-cohesive deposits; however the founding soils could also consist of the cohesive deposits encountered throughout the site. Temporary excavations may be carried out using open cut methods using a large excavator.

All excavation work should be carried out in accordance with the Occupational Health and Safety Act and Regulations (OHSA) and with local regulations. In general, temporary open cuts of 1H:1V are considered feasible. Stockpiles of excavated material should be set back from the edge of the excavation by a distance at least equal to the excavation depth.

Groundwater was measured at the site in the monitoring wells as high as 2.4 m below existing site grades. However, in general the groundwater at the site is relatively deep and, in this regard, significant amounts of groundwater are not anticipated to be encountered during the servicing excavations. Therefore, it is anticipated that any water flow into the excavation will be minor and should be controllable by conventional sumps and pumps. In this regard, a PTTW will not likely be required; however, the need for either an EASR or a PTTW should be reassessed once the design invert depths for the entire site are finalized.

The groundwater levels can fluctuate due to seasonal variations, and as such, to minimize the potential for dewatering, if possible, excavations for the foundations should be conducted in the summer or fall months when groundwater levels are typically at their lowest levels.

5.5.2 Pipe Bedding and Cover

The native soils are considered to be suitable for supporting sewers and watermain provided that the integrity of the base of the trench excavations can be maintained during construction. If deleterious materials are encountered at the base of excavations for settlement-sensitive services, these materials should be subexcavated and replaced with compacted bedding materials approved by Golder.

The pipe bedding, embedment and cover soils should be compatible with the sizes, type and class of pipe(s) and the surrounding subsoil. The design should be in accordance with the applicable OPSD standards (1100 series), OPSS 441, OPSS 501 and the City of Barrie's Standards. If granular bedding is used, OPSS 1010 Granular "A" may be used from at least 150 mm below invert to springline of the pipe. From springline to 300 mm above the obvert of the pipe, sand cover could be used. Backfill above the embedment/cover soils could consist of suitable approved native soils.



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5.5.3 Trench Backfill

The excavated materials from trenches for servicing will predominantly consist of native non-cohesive deposits, variable till, and clayey silt to silty clay soils. These materials are considered suitable for use as trench backfill provided their water contents at the time of construction are at or near their optimum water content for compaction. Any boulders or cobbles greater than 150 mm in size should be removed from the trench backfill. If required an approved imported material such as OPSS 1010 SSM should be used for trench backfill in lieu of native materials.

The trench backfill should be placed in maximum 300 mm loose lift thickness and uniformly compacted to at least 95 percent of its SPMDD. **Backfilling work should be carried out under the regular inspection by Golder.**

It is anticipated that the majority of the compacted backfill will comprise the native soils; as such, post-construction settlement of the compacted backfill may occur, with the majority of such settlement taking place within about six to nine months following the completion of the backfilling operations. This settlement would be reflected at the ground surface. To provide a more uniform transition of the ground surface from the undisturbed native material to the trench backfill as applicable, the sides of the excavation should be sloped at an inclination no steeper than 1 horizontal to 1 vertical, outwards and upwards from the base of the excavation.

5.6 Preliminary Pavement Design

Based on the borehole results, the subgrade for the pavement structure will generally comprise competent highly frost susceptible variable glacial till, both non-cohesive and cohesive deposits, and potentially engineered fill. Prior to placing any granular material, the exposed subgrade should be prepared and heavily proof-rolled under the supervision of the geotechnical engineer. Remedial work should be carried out on any disturbed, softened or poorly performing zones, as directed by the geotechnical engineer. The recommended preliminary pavement design for this proposed redevelopment is outlined below and is consistent with City of Barrie Standards.

Material		Thickness of Pavement Elements (mm)	
		Urban Residential Road (8.5 m Asphalt)	Urban Residential Road (11.0 m Asphalt)
Asphaltic Material (OPSS 1150)	HL3 Surface	40	40
	HL4 or HL8 8 Binder	70	100
Granular Material (OPSS 1010)	Granular A Base	150	150
	Granular B Subbase	300	400
Total Pavement Thickness (mm)		560	690
		Over Prepared And Approved Subgrade	

Granular materials should be uniformly compacted to 100 percent of the Standard Proctor Maximum Dry Density (SPMDD). The asphalt materials should be compacted to between 92.0 and 96.5 percent of their Marshall Maximum Relative Densities (MRDs), as measured in the field using a nuclear density gauge.

It should be noted that the pavement structure provided above is not intended to support heavy construction traffic. In this regard, heavy construction traffic, including triaxials, graders, etc., should be limited to areas of the site where suitable temporary access roads have been constructed so that disturbance to the native soils will be



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minimized. The contractor should be responsible for determining the locations of, and constructing, these temporary access roads.

Permanent subsurface drainage will be required to preserve the integrity of the paved areas. It is anticipated that the subdrainage system would be connected to catchbasins draining to storm sewers. In this regard, the subgrade should be carefully proofrolled to a smooth surface and sloped towards the catchbasins to prevent ponding or entrapment of water in the subbase, which would lead to weakened sections and general poor performance. Short (5 m to 6 m long) perforated subdrains should be provided at internal catchbasin locations on all four sides of the catchbasins.

Positive drainage should be provided to the subgrade. Subdrains and subdrains should be a minimum of 300 mm below the bottom of the granular subbase and connected to the catchbasins. The drains should consist of 100 mm or 150 mm diameter geotextile wrapped perforated pipe, surrounded on all sides by at least 150 mm of clean free draining sand such as concrete sand. The top of the concrete sand should be at the subgrade level.

Golder should provide additional design recommendations regarding the pavement design once final grades have been determined and traffic data is provided.

5.7 Preliminary Geotechnical Input to Storm Water Management Ponds

Boreholes 16-06, 16-14, and 16-40 were advanced within the proposed footprint of the three SWM Ponds to be constructed at the site. The subsurface conditions in the boreholes generally comprise non-cohesive deposits ranging between silty sand to sand. A shallow silty clay layer was encountered in Borehole 16-06 at a depth of 0.7 m below existing site grades and is about 0.7 m in thickness; a silty clay till deposit was encountered in Borehole 16-14 at a depth of 1.4 m below existing site grades and is about 1.5 m in thickness. A summary of the groundwater levels measured in these three boreholes is provided in the table below.

Borehole No.	Groundwater Depth / Elevation On Completion		Groundwater Depth / Elevation On November 9, 2016	
	Depth below Existing Grade (m)	Elevation (m)	Depth below Existing Grade (m)	Elevation (m)
16-06	12.0	251.8	Dry	< 251.2
16-14	6.1	254.2	5.9	254.4
16-40	5.7	247.6	2.4	250.9

Given the variable and granular nature of the native soils, a low-permeability or impervious liner will need to be installed to limit seepage out of the pond through these pervious soils if the normal operating water level/permanent pool elevation is to be maintained within the pond. Depending on the final site grades within the SWM Pond blocks, dewatering may be required, in particular for the SWM Pond to be constructed in the vicinity of Boreholes 16-14 and 16-40; in this regard, an additional assessment should be completed once the design grades of the SWM Ponds are known.

For preliminary planning purposes, side slopes of 3 Horizontal to 1 Vertical (3H:1V) are considered feasible within the SWM Ponds.



5.8 Soil Submission

In order to provide preliminary information regarding the chemical quality of the subsurface soil, ten soil samples were submitted to AGAT Laboratories Ltd. of Mississauga, Ontario ("AGAT") for the following parameters:

- Heavy Metals;
- Volatile Organic Compounds (VOCs);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Petroleum Hydrocarbons (PHCs, F1 to F4; and)
- Conductivity, Sodium Absorption Ratio and Chloride.

The depth of the soil samples ranged between 0.8 m to 1.5 m below existing site grades.

5.8.1 Soil Analytical Results

The soil sample analytical results were compared to the Ontario Ministry of the Environment ("MOE") *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"*, April 15, 2011, Table 1 Full Depth Background Site Condition Standards for All Other Types of Property Use ("MOE Table 1 Standards").

A summary of the soil analytical results and the MOE Table 1 Standards is provided on the Laboratory Certificates of Analysis, included in Appendix C. Based on the results of the analyses and the Standards comparison, no exceedances were noted.

6.0 ADDITIONAL WORK, INSPECTIONS AND TESTING

As noted above, prior to completing the proposed development, further site specific geotechnical assessment will be required. Prior to tendering, the geotechnical aspects of the final design drawings and specifications and the proposed geo-related construction methodology should be reviewed by Golder to confirm that the various aspects outlined in this report have been met.

During construction, sufficient subgrade monitoring, in-situ density tests, and materials tests should be carried out to confirm that the ground conditions encountered are consistent with those encountered in the boreholes, and to monitor conformance with the pertinent project specifications. Regular geo-monitoring should be performed by Golder geotechnical personnel during construction.



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Report Signature Page

If you have any questions or concerns regarding the contents of this report, please contact our office or the persons below.

Yours truly,

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Soil, Rock and Ground water Conditions: Classification and identification of soils, rocks, and geologic units have been based on commonly accepted methods employed in the practice of geotechnical engineering and related disciplines. Classification and identification of the type and condition of these materials or units involves judgment, and boundaries between different soil, rock or geologic types or units may be transitional rather than abrupt. Accordingly, Golder does not warrant or guarantee the exactness of the descriptions.



IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain subsurface conditions. The environmental, geologic, geotechnical, geochemical and hydrogeologic conditions that Golder interprets to exist between and beyond sampling points may differ from those that actually exist. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site or on adjacent properties. The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site, unless otherwise specifically stated and identified in the report. The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources are outside the terms of reference for this project and have not been investigated or addressed.

Soil and groundwater conditions shown in the factual data and described in the report are the observed conditions at the time of their determination or measurement. Unless otherwise noted, those conditions form the basis of the recommendations in the report. Groundwater conditions may vary between and beyond reported locations and can be affected by annual, seasonal and meteorological conditions. The condition of the soil, rock and groundwater may be significantly altered by construction activities (traffic, excavation, groundwater level lowering, pile driving, blasting, etc.) on the site or on adjacent sites. Excavation may expose the soils to changes due to wetting, drying or frost. Unless otherwise indicated the soil must be protected from these changes during construction.

Sample Disposal: Golder will dispose of all uncontaminated soil and/or rock samples 90 days following issue of this report or, upon written request of the Client, will store uncontaminated samples and materials at the Client's expense. In the event that actual contaminated soils, fills or groundwater are encountered or are inferred to be present, all contaminated samples shall remain the property and responsibility of the Client for proper disposal.

Follow-Up and Construction Services: All details of the design were not known at the time of submission of Golder's report. Golder should be retained to review the final design, project plans and documents prior to construction, to confirm that they are consistent with the intent of Golder's report.

During construction, Golder should be retained to perform sufficient and timely observations of encountered conditions to confirm and document that the subsurface conditions do not materially differ from those interpreted conditions considered in the preparation of Golder's report and to confirm and document that construction activities do not adversely affect the suggestions, recommendations and opinions contained in Golder's report. Adequate field review, observation and testing during construction are necessary for Golder to be able to provide letters of assurance, in accordance with the requirements of many regulatory authorities. In cases where this recommendation is not followed, Golder's responsibility is limited to interpreting accurately the information encountered at the borehole locations, at the time of their initial determination or measurement during the preparation of the Report.

Changed Conditions and Drainage: Where conditions encountered at the site differ significantly from those anticipated in this report, either due to natural variability of subsurface conditions or construction activities, it is a condition of this report that Golder be notified of any changes and be provided with an opportunity to review or revise the recommendations within this report. Recognition of changed soil and rock conditions requires experience and it is recommended that Golder be employed to visit the site with sufficient frequency to detect if conditions have changed significantly.

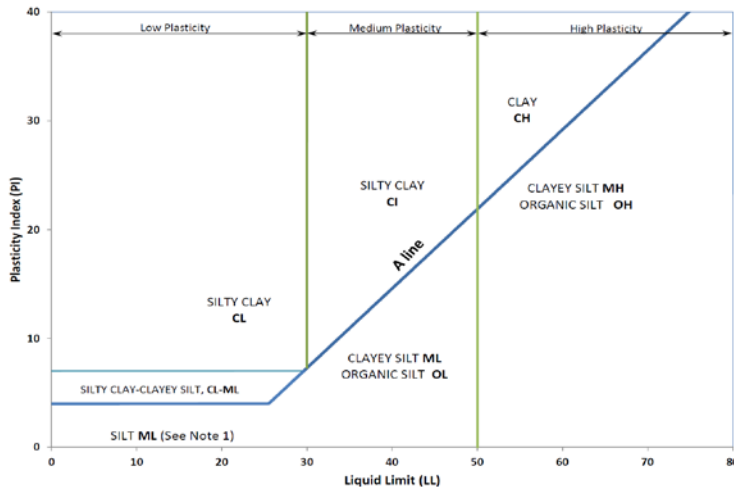
Drainage of subsurface water is commonly required either for temporary or permanent installations for the project. Improper design or construction of drainage or dewatering can have serious consequences. Golder takes no responsibility for the effects of drainage unless specifically involved in the detailed design and construction monitoring of the system.



METHOD OF SOIL CLASSIFICATION

The Golder Associates Ltd. Soil Classification System is based on the Unified Soil Classification System (USCS)

Organic or Inorganic	Soil Group	Type of Soil		Gradation or Plasticity	$Cu = \frac{D_{60}}{D_{10}}$		$Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$			Organic Content	USCS Group Symbol	Group Name			
INORGANIC (Organic Content $\leq 30\%$ by mass)	COARSE-GRAINED SOILS ($>50\%$ by mass is larger than 0.075 mm)	GRAVELS ($>50\%$ by mass of coarse fraction is larger than 4.75 mm)	Gravels with $\leq 12\%$ fines (by mass)	Poorly Graded	<4		≤ 1 or ≥ 3			$\leq 30\%$	GP	GRAVEL			
				Well Graded	≥ 4		1 to 3				GW	GRAVEL			
			Gravels with $>12\%$ fines (by mass)	Below A Line	n/a							GM	SILTY GRAVEL		
				Above A Line	n/a							GC	CLAYEY GRAVEL		
		SANDS ($\geq 50\%$ by mass of coarse fraction is smaller than 4.75 mm)	Sands with $\leq 12\%$ fines (by mass)	Poorly Graded	<6		≤ 1 or ≥ 3				SP	SAND			
				Well Graded	≥ 6		1 to 3				SW	SAND			
			Sands with $>12\%$ fines (by mass)	Below A Line	n/a							SM	SILTY SAND		
				Above A Line	n/a							SC	CLAYEY SAND		
			Organic or Inorganic	Soil Group	Type of Soil	Laboratory Tests	Field Indicators					Organic Content	USCS Group Symbol	Primary Name	
							Dilatancy	Dry Strength	Shine Test		Thread Diameter	Toughness (of 3 mm thread)			
INORGANIC (Organic Content $\leq 30\%$ by mass)	FINE-GRAINED SOILS ($\geq 50\%$ by mass is smaller than 0.075 mm)	SILTS (Non-Plastic or PI and LL plot below A-Line on Plasticity Chart below)	Liquid Limit <50	Rapid	None	None	>6 mm	N/A (can't roll 3 mm thread)	$<5\%$	ML	SILT				
				Slow	None to Low	Dull	3mm to 6 mm	None to low	$<5\%$	ML	CLAYEY SILT				
				Slow to very slow	Low to medium	Dull to slight	3mm to 6 mm	Low	5% to 30%	OL	ORGANIC SILT				
			Liquid Limit ≥ 50	Slow to very slow	Low to medium	Slight	3mm to 6 mm	Low to medium	$<5\%$	MH	CLAYEY SILT				
		None		Medium to high	Dull to slight	1 mm to 3 mm	Medium to high	5% to 30%	OH	ORGANIC SILT					
		CLAYS (PI and LL plot above A-Line on Plasticity Chart below)	Liquid Limit <30	None	Low to medium	Slight to shiny	~ 3 mm	Low to medium	0% to 30% (see Note 2)	CL	SILTY CLAY				
			Liquid Limit 30 to 50	None	Medium to high	Slight to shiny	1 mm to 3 mm	Medium		CI	SILTY CLAY				
			Liquid Limit ≥ 50	None	High	Shiny	<1 mm	High		CH	CLAY				
			HIGHLY ORGANIC SOILS (Organic Content $>30\%$ by mass)		Peat and mineral soil mixtures						30% to 75%	PT	SILTY PEAT, SANDY PEAT		
		Predominantly peat, may contain some mineral soil, fibrous or amorphous peat								75% to 100%	PEAT				



Note 1 – Fine grained materials with PI and LL that plot in this area are named (ML) SILT with slight plasticity. Fine-grained materials which are non-plastic (i.e. a PL cannot be measured) are named SILT.

Note 2 – For soils with $<5\%$ organic content, include the descriptor “trace organics” for soils with between 5% and 30% organic content include the prefix “organic” before the Primary name.

Dual Symbol — A dual symbol is two symbols separated by a hyphen, for example, GP-GM, SW-SC and CL-ML.

For non-cohesive soils, the dual symbols must be used when the soil has between 5% and 12% fines (i.e. to identify transitional material between “clean” and “dirty” sand or gravel.

For cohesive soils, the dual symbol must be used when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart (see Plasticity Chart at left).

Borderline Symbol — A borderline symbol is two symbols separated by a slash, for example, CL/CI, GM/SM, CL/ML.

A borderline symbol should be used to indicate that the soil has been identified as having properties that are on the transition between similar materials. In addition, a borderline symbol may be used to or indicates a range of similar soil types within a stratum.



ABBREVIATIONS AND TERMS USED ON RECORDS OF BOREHOLES AND TEST PITS

PARTICLE SIZES OF CONSTITUENTS

Soil Constituent	Particle Size Description	Millimetres	Inches (US Std. Sieve Size)
BOULDERS	Not Applicable	>300	>12
COBBLES	Not Applicable	75 to 300	3 to 12
GRAVEL	Coarse Fine	19 to 75 4.75 to 19	0.75 to 3 (4) to 0.75
SAND	Coarse Medium Fine	2.00 to 4.75 0.425 to 2.00 0.075 to 0.425	(10) to (4) (40) to (10) (200) to (40)
SILT/CLAY	Classified by plasticity	<0.075	< (200)

MODIFIERS FOR SECONDARY AND MINOR CONSTITUENTS

Percentage by Mass	Modifier
>35	Use 'and' to combine major constituents (i.e., SAND and GRAVEL, SAND and CLAY)
> 12 to 35	Primary soil name prefixed with "gravelly, sandy, SILTY, CLAYEY" as applicable
> 5 to 12	some
≤ 5	trace

PENETRATION RESISTANCE

Standard Penetration Resistance (SPT), N:

The number of blows by a 63.5 kg (140 lb) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) split-spoon sampler for a distance of 300 mm (12 in.).

Cone Penetration Test (CPT)

An electronic cone penetrometer with a 60° conical tip and a project end area of 10 cm² pushed through ground at a penetration rate of 2 cm/s. Measurements of tip resistance (q_t), porewater pressure (u) and sleeve frictions are recorded electronically at 25 mm penetration intervals.

Dynamic Cone Penetration Resistance (DCPT); N_d :

The number of blows by a 63.5 kg (140 lb) hammer dropped 760 mm (30 in.) to drive uncased a 50 mm (2 in.) diameter, 60° cone attached to "A" size drill rods for a distance of 300 mm (12 in.).

PH: Sampler advanced by hydraulic pressure
PM: Sampler advanced by manual pressure
WH: Sampler advanced by static weight of hammer
WR: Sampler advanced by weight of sampler and rod

SAMPLES

AS	Auger sample
BS	Block sample
CS	Chunk sample
DO or DP	Seamless open ended, driven or pushed tube sampler – note size
DS	Denison type sample
FS	Foil sample
RC	Rock core
SC	Soil core
SS	Split spoon sampler – note size
ST	Slotted tube
TO	Thin-walled, open – note size
TP	Thin-walled, piston – note size
WS	Wash sample

SOIL TESTS

w	water content
PL, w_p	plastic limit
LL, w_L	liquid limit
C	consolidation (oedometer) test
CHEM	chemical analysis (refer to text)
CID	consolidated isotropically drained triaxial test ¹
CIU	consolidated isotropically undrained triaxial test with porewater pressure measurement ¹
D_r	relative density (specific gravity, G_s)
DS	direct shear test
GS	specific gravity
M	sieve analysis for particle size
MH	combined sieve and hydrometer (H) analysis
MPC	Modified Proctor compaction test
SPC	Standard Proctor compaction test
OC	organic content test
SO ₄	concentration of water-soluble sulphates
UC	unconfined compression test
UU	unconsolidated undrained triaxial test
V (FV)	field vane (LV-laboratory vane test)
Y	unit weight

1. Tests which are anisotropically consolidated prior to shear are shown as CAD, CAU.

NON-COHESIVE (COHESIONLESS) SOILS

Compactness²

Term	SPT 'N' (blows/0.3m) ¹
Very Loose	0 - 4
Loose	4 to 10
Compact	10 to 30
Dense	30 to 50
Very Dense	>50

- SPT 'N' in accordance with ASTM D1586, uncorrected for overburden pressure effects.
- Definition of compactness descriptions based on SPT 'N' ranges from Terzaghi and Peck (1967) and correspond to typical average N_{60} values.

Field Moisture Condition

Term	Description
Dry	Soil flows freely through fingers.
Moist	Soils are darker than in the dry condition and may feel cool.
Wet	As moist, but with free water forming on hands when handled.

COHESIVE SOILS

Consistency

Term	Undrained Shear Strength (kPa)	SPT 'N' ¹ (blows/0.3m)
Very Soft	<12	0 to 2
Soft	12 to 25	2 to 4
Firm	25 to 50	4 to 8
Stiff	50 to 100	8 to 15
Very Stiff	100 to 200	15 to 30
Hard	>200	>30

- SPT 'N' in accordance with ASTM D1586, uncorrected for overburden pressure effects; approximate only.

Water Content

Term	Description
$w < PL$	Material is estimated to be drier than the Plastic Limit.
$w \sim PL$	Material is estimated to be close to the Plastic Limit.
$w > PL$	Material is estimated to be wetter than the Plastic Limit.



LIST OF SYMBOLS

Unless otherwise stated, the symbols employed in the report are as follows:

I. GENERAL

π	3.1416
$\ln x$	natural logarithm of x
$\log_{10}$	x or log x, logarithm of x to base 10
g	acceleration due to gravity
t	time

II. STRESS AND STRAIN

γ	shear strain
Δ	change in, e.g. in stress: $\Delta \sigma$
ε	linear strain
ε_v	volumetric strain
η	coefficient of viscosity
ν	Poisson's ratio
σ	total stress
σ'	effective stress ($\sigma' = \sigma - u$)
σ'_{vo}	initial effective overburden stress
$\sigma_1, \sigma_2, \sigma_3$	principal stress (major, intermediate, minor)
σ_{oct}	mean stress or octahedral stress $= (\sigma_1 + \sigma_2 + \sigma_3)/3$
τ	shear stress
u	porewater pressure
E	modulus of deformation
G	shear modulus of deformation
K	bulk modulus of compressibility

III. SOIL PROPERTIES

(a) Index Properties

$\rho(\gamma)$	bulk density (bulk unit weight)*
$\rho_d(\gamma_d)$	dry density (dry unit weight)
$\rho_w(\gamma_w)$	density (unit weight) of water
$\rho_s(\gamma_s)$	density (unit weight) of solid particles
γ'	unit weight of submerged soil ($\gamma' = \gamma - \gamma_w$)
D_R	relative density (specific gravity) of solid particles ($D_R = \rho_s / \rho_w$) (formerly G_s)
e	void ratio
n	porosity
S	degree of saturation

(a) Index Properties (continued)

w	water content
w_l or LL	liquid limit
w_p or PL	plastic limit
I_p or PI	plasticity index = $(w_l - w_p)$
w_s	shrinkage limit
I_L	liquidity index = $(w - w_p) / I_p$
I_C	consistency index = $(w_l - w) / I_p$
e_{max}	void ratio in loosest state
e_{min}	void ratio in densest state
I_D	density index = $(e_{max} - e) / (e_{max} - e_{min})$ (formerly relative density)

(b) Hydraulic Properties

h	hydraulic head or potential
q	rate of flow
v	velocity of flow
i	hydraulic gradient
k	hydraulic conductivity (coefficient of permeability)
j	seepage force per unit volume

(c) Consolidation (one-dimensional)

C_c	compression index (normally consolidated range)
C_r	recompression index (over-consolidated range)
C_s	swelling index
C_α	secondary compression index
m_v	coefficient of volume change
C_v	coefficient of consolidation (vertical direction)
C_h	coefficient of consolidation (horizontal direction)
T_v	time factor (vertical direction)
U	degree of consolidation
σ'_p	pre-consolidation stress
OCR	over-consolidation ratio = σ'_p / σ'_{vo}

(d) Shear Strength

τ_p, τ_r	peak and residual shear strength
ϕ'	effective angle of internal friction
δ	angle of interface friction
μ	coefficient of friction = $\tan \delta$
c'	effective cohesion
C_u, S_u	undrained shear strength ($\phi = 0$ analysis)
p	mean total stress $(\sigma_1 + \sigma_3)/2$
p'	mean effective stress $(\sigma'_1 + \sigma'_3)/2$
q	$(\sigma_1 - \sigma_3)/2$ or $(\sigma'_1 - \sigma'_3)/2$
q_u	compressive strength $(\sigma_1 - \sigma_3)$
S_t	sensitivity

* Density symbol is ρ . Unit weight symbol is γ where $\gamma = \rho g$ (i.e. mass density multiplied by acceleration due to gravity)

Notes: 1
2

$$\tau = c' + \sigma' \tan \phi'$$

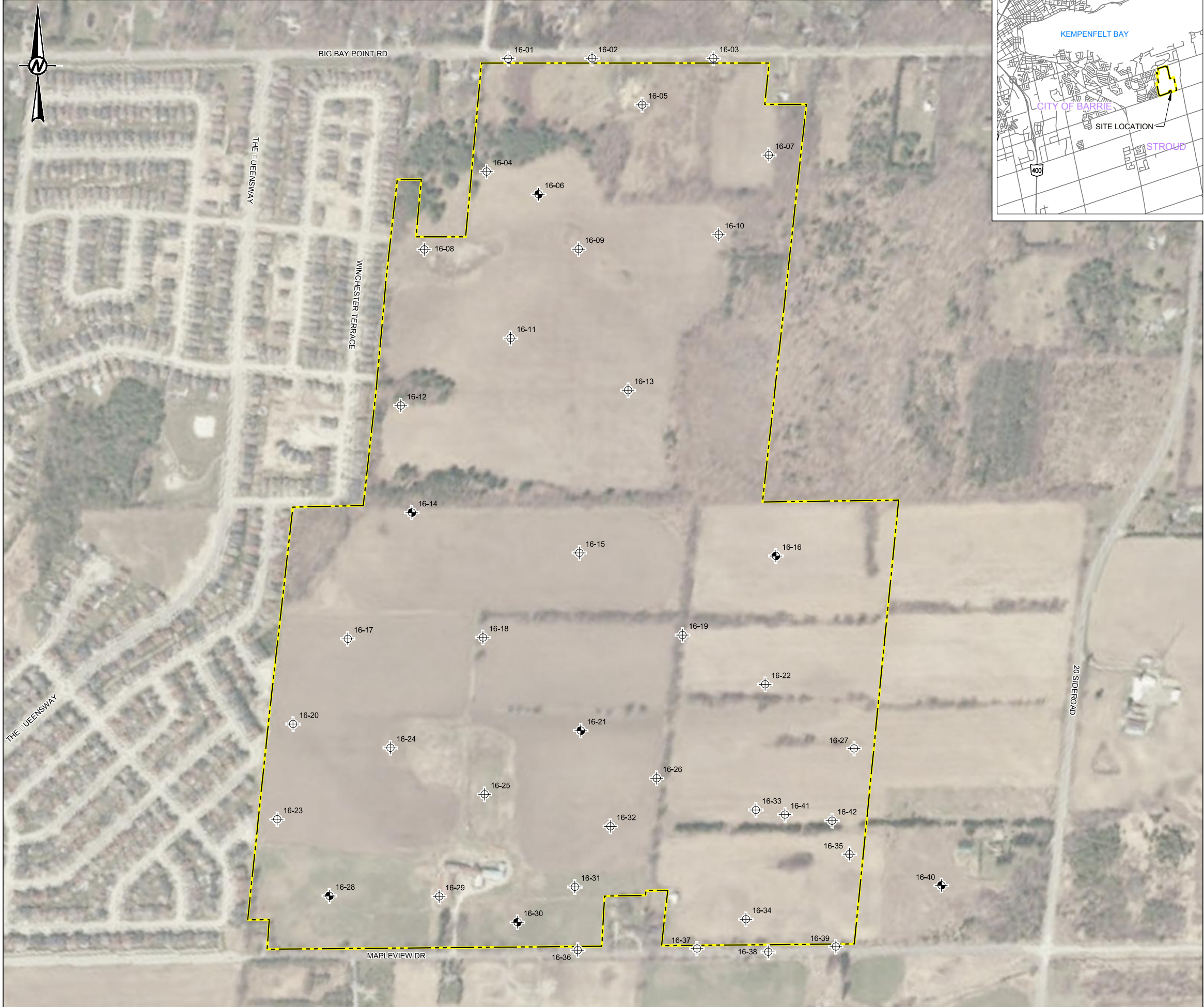
$$\text{shear strength} = (\text{compressive strength})/2$$



PRELIMINARY GEOTECHNICAL INVESTIGATION LM BLUESKY - PROPOSED RESIDENTIAL DEVELOPMENT, BARRIE, ONTARIO

FIGURES

Path: \\golder\gpc\proj\mess\gpc\SM\Clients\LM_Holdings\BlueSky_Barrie\40_PROJ\0001_BlueSky_Geotech File Name: 1661309-001-BS-0001.dwg



LEGEND

 BOREHOLE LOCATION

 MONITORING WELL LOCATION

 APPROXIMATE PROPERTY BOUNDARY



NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2016
BASE IMAGERY SOURCE: COUNTY OF SIMCOE GIS, OBTAINED 2016
BOREHOLE LOCATIONS SURVEYED BY JOETOPO SURVEYS & CADD INC. OCTOBER 31, 2016
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2015
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT

LM BARRIE / BLUESKY

PROJECT

BLUE SKY GEOTECHNICAL INVESTIGATION
BARRIE, ONTARIO

TITLE

BOREHOLE LOCATION PLAN

CONSULTANT	YYYY-MM-DD	2016-12-19
	DESIGNED	
	PREPARED	STB
	REVIEWED	NLP
	APPROVED	



PROJECT NO.	Control	REV.	Figure
1661309			1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

28 mm



**PRELIMINARY GEOTECHNICAL INVESTIGATION
LM BLUESKY - PROPOSED RESIDENTIAL DEVELOPMENT,
BARRIE, ONTARIO**

APPENDIX A

Record of Borehole Sheets

PROJECT: 1661309
LOCATION: N 4913567.30; E 611248.19

RECORD OF BOREHOLE: BH16-01

BORING DATE: October 7, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ⊙		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0		GROUND SURFACE		262.96													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00 0.10	1	DO	11										
		FILL-(SP) SAND, trace to some gravel, some silt to silty; orange to light brown; non-cohesive, dry to moist, compact		262.27 0.69													
1			(SM) SILTY SAND, trace to some gravel; brown; non-cohesive, moist, loose to compact			2	DO	6									
2																	
3			(SC) CLAYEY SAND, trace to some gravel; grey brown, (TILL); cohesive, w<PL to w~PL, very stiff to hard		260.37 2.59	4A 4B	DO	9									
4																	
		TILL in Sample 5 and Sample 6															
5																	
												</					

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309
LOCATION: N 4913607.55; E 611370.82

RECORD OF BOREHOLE: BH16-02

BORING DATE: October 7, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. U -		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
		GROUND SURFACE		263.79													
0	Truck Mount Power Auger Solid Stem Auger	FILL-(SW) gravelly SAND, some silt; brown; non-cohesive, moist, compact		0.00	1	DO	13										
		FILL-(ML) sandy SILT, trace to some gravel; grey; non-cohesive, moist, compact		263.49 0.30													
		(SP) SAND, trace silt, trace gravel; orange brown; non-cohesive, moist, very loose to loose		263.10 0.69				2	DO	7							
1																	
2			(SM) SILTY SAND, some gravel to gravelly; brown; non-cohesive, moist, loose		261.66 2.13	4	DO	9									
3			(SC) CLAYEY SAND, trace to some gravel; grey, (TILL); cohesive, w<PL, very stiff		260.89 2.90	5	DO	22									
4		(SW) SAND, trace to some gravel, some silt; light brown to grey; non-cohesive, dry to moist, very dense		259.68 4.11	6	DO	69										
5		End of Borehole		258.76 5.03													
6		NOTE: 1. Borehole dry upon completion of drilling October 7, 2016.															
7																	
8																	
9																	
10																	

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309

LOCATION: N 4913665.27; E 611547.78

RECORD OF BOREHOLE: BH16-03

SHEET 1 OF 1

BORING DATE: October 7, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
								nat V. + Q - ● rem V. ⊕ U - ○				Wp ———— W ———— Wi					
								20	40	60	80	10	20	30	40		
0		GROUND SURFACE		266.38													
	Truck Mount Power Auger Solid Stem Auger	FILL-(SM) SILTY SAND, some gravel to gravelly; brown; non-cohesive, dry to moist, compact		0.00	1	DO	11										
				265.69													
1		(SW) gravelly SAND, some silt; brown to black; non-cohesive, dry to moist, very loose to compact		0.69	2	DO	4										
2																	
3		(SW) SAND, trace gravel, some silt to silty; brown or light brown; non-cohesive, dry to moist, compact to dense		2.14	4	DO	33										
4		(ML) sandy SILT, trace gravel; brown; non-cohesive, moist, compact		3.96													
5																	

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309
LOCATION: N 4913392.12; E 611270.51

RECORD OF BOREHOLE: BH16-04

BORING DATE: October 13, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ⊙		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
		GROUND SURFACE		262.44													
0	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
		(SP) SAND, trace silt; orange brown; non-cohesive, dry to moist, loose		0.15	1	DO	6										
1		(SC) CLAYEY SAND, trace sand, trace to some gravel; brown grey, (TILL); cohesive, w<PL, stiff to hard		261.75 0.69	2	DO	12										
2																	
3		(SW) SAND, trace gravel, trace to some silt; light brown, cobble fragments; non-cohesive, dry to moist, very dense		259.54 2.90	5	DO	50/ 153 mm										
4																	
5																	
6																	
		</															

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309
LOCATION: N 4913563.61; E 611465.91

RECORD OF BOREHOLE: BH16-05

BORING DATE: October 13, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION							
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT											
								20		40		60		80			10 ⁻⁵		10 ⁻⁴		10 ⁻³		
								nat V. + rem V. ⊕		Q - ● U - ○		Wp		W			WI						
0		GROUND SURFACE		263.08																			
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00																			
		(SP) SAND, trace to some silt; orange brown; non-cohesive, dry to moist, loose		0.13	1	DO	5																
1					2	DO	8																
		(ML) sandy SILT; brown; non-cohesive, moist, loose		261.71 1.37	3	DO	9																
2																							
		(SC) CLAYEY SAND, some gravel; brown, (TILL); cohesive, w<PL, very stiff to hard		260.95 2.13	4	DO	18																
3					5	DO	39																
4		(SP) SAND, trace to some silt; light brown; non-cohesive, dry to moist, very dense		259.04 4.04	6	DO	65																
5																							
6		(ML) sandy SILT; grey; non-cohesive, dry to moist, very dense		257.52 5.56	7	DO	78																
7		End of Borehole		256.53 6.55																			
		NOTE: 1. Borehole dry upon completion of drilling October 13, 2016.																					
8																							
9																							
10																							

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

LOCATION: N 4913383.53; E 611357.12

RECORD OF BOREHOLE: BH16-06

BORING DATE: October 13, 2016

SHEET 1 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT						
								20	40	60	80	10 ⁻⁵	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
																		Wp ———— W ———— Wi
								20	40	60	80	10	20	30	40			
0	Truck Mount Power Auger 4 1/4" Hollow Stem Auger	GROUND SURFACE		263.84														
		TOPSOIL		0.00														
		(SM) SILTY SAND; orange brown; non-cohesive, dry to moist, very loose		0.15	1	DO	3										Concrete Casing	
1		(CL) SILTY CLAY; brown; cohesive, w~PL to w<PL, stiff		263.15 0.69	2	DO	12											
		(SM) SILTY SAND, trace to some gravel; grey brown; non-cohesive, moist, compact		262.47 1.37	3	DO	18											
2					4	DO	29											
3		(SW) SAND, some silt, some gravel; grey brown; non-cohesive, dry to moist, dense to very dense		261.10 2.74	5	DO	36											
					6	DO	60											
4																		
5																		
6		(SP) SAND, trace to some silt; light brown; non-cohesive, dry to moist, very dense		258.28 5.56	7	DO	50/ 127 mm											
7																		
8					8	DO	50/ 127 mm									M		
9					9	DO	50/ 102 mm									Bentonite #3 Silica Sand		
		laminated in Sample 9														10 Slot PVC Screen		
10		CONTINUED NEXT PAGE																

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GIN\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309
LOCATION: N 4913383.53; E 611357.12

RECORD OF BOREHOLE: BH16-06

BORING DATE: October 13, 2016

SHEET 2 OF 2
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - ● rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp — W — Wi						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵			10 ⁻⁴	10 ⁻³	
10	Truck Mount Power Auger 4 1/4" Hollow Stem Auger	--- CONTINUED FROM PREVIOUS PAGE --- (SP) SAND, trace to some silt; light brown; non-cohesive, dry to moist, very dense		251.19 12.65	10	DO	50/ 102 mm											
11																		
12					11	DO	50/ 152 mm											
13	End of Borehole																	
14	NOTES: 1. Groundwater measured at a depth of 12.0 m below existing grade upon completion of drilling October 13, 2016. 2. Monitoring well dry on November 9, 2016.																	
15																		
16																		
17																		
18																		
19																		
20																		

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

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PROJECT: 1661309
 LOCATION: N 4913550.22; E 611675.08

RECORD OF BOREHOLE: BH16-07

BORING DATE: October 14, 2016

SHEET 1 OF 1
 DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
												Wp — W — WI					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0		GROUND SURFACE		266.02													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
		(SP) SAND, some silt; light brown to orange brown; non-cohesive, dry to moist, loose		0.10	1	DO	10										
				265.33													
1		(SM) SILTY SAND, trace gravel; light brown; non-cohesive, dry, compact to dense		0.69	2	DO	29										
						3	DO	43									
2																	
		(SW) SAND, trace to some silt, trace to some gravel; light brown; non-cohesive, dry to moist, very dense		2.13	4	DO	65										
			263.89														
3					5	DO	73										
4		(SP) SAND, trace to some silt, trace to some gravel; light brown; non-cohesive, dry to moist, very dense		4.04	6	DO	50										
5																	
		(SM-ML) SILTY SAND to sandy SILT; light brown, laminated; non-cohesive, moist, dense		5.56	7	DO	39										
				260.46													
6																	
		End of Borehole		259.47													
7		NOTE: 1. Groundwater measured at a depth of 5.6 m below existing grade upon completion of drilling October 14, 2016.		6.55													
8																	
9																	
10																	

DEPTH SCALE
 1 : 50



LOGGED: DF
 CHECKED: NL

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PROJECT: 1661309

LOCATION: N 4913248.67; E 611216.33

RECORD OF BOREHOLE: BH16-08

SHEET 1 OF 1

BORING DATE: October 13, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RESISTANCE, BLOWS/0.3m				k, cm/s					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
								SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT Wp — W — Wi					
								nat V. + Q - ● rem V. ⊕ U - ○									
								20	40	60	80	10	20	30	40		
0		GROUND SURFACE		263.59													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		263.59													
		(SP) SAND, trace to some silt, trace to some gravel; light brown; non-cohesive, dry to moist, loose to compact		261.46	1	DO	7										
1				2.13													
					2	DO	17										
					3	DO	29										
2																	
		(CL) SILTY CLAY; brown; cohesive, w<PL, very stiff		260.85	4	DO	17										
				2.74													
					5	DO	48										
3																	
		(SC) CLAYEY SAND, trace to some gravel; grey brown, (TILL); cohesive, w<PL, hard		258.87	6	DO	54										
				4.72													
5																	
		(SM) SILTY SAND, trace to some gravel; grey brown; non-cohesive, dry to moist, dense to very dense		257.04	7	DO	44										
				6.55													
		cobble fragments in Sample 7															
7		End of Borehole															
		NOTE:															
		1. Borehole dry upon completion of drilling October 13, 2016.															
8																	
9																	
10																	

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4913322.47; E 611441.76

RECORD OF BOREHOLE: BH16-09

BORING DATE: October 13, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s					
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ●		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
0		GROUND SURFACE		266.90													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
		(SW) gravelly SAND, trace silt; brown to light brown; non-cohesive, dry to moist, loose to dense		0.13	1	DO	6										
1		silty pockets in Sample 2			2	DO	32										
		silty in Sample 3A			3	DO	29										
2																	
		(SM) SILTY SAND, trace to some gravel; brown, oxidation staining; non-cohesive, moist, compact to dense		264.77 2.13	4	DO	14										
3						5	DO	38									
4																	
	(SW) SAND, trace gravel; some silt to silty; light brown; non-cohesive, dry to moist, dense to very dense		262.86 4.04	6	DO	60											
5																	
6																	
					7	DO	50										
		End of Borehole		260.35 6.55													
7		NOTE: 1. Borehole dry upon completion of drilling October 13, 2016.															
8																	
9																	
10																	

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

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PROJECT: 1661309

LOCATION: N 4913410.28; E 611639.50

RECORD OF BOREHOLE: BH16-10

SHEET 1 OF 1

BORING DATE: October 14, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT						
								20 40 60 80				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³						
								nat V. + Q - rem V. ⊕ U - ●				Wp — W — Wl						
0		GROUND SURFACE		266.41														
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00														
		(SW) SAND, trace to some silt, trace to some gravel, some plastic fines; brown to light brown; non-cohesive, dry to moist, loose to compact		0.13	1	DO	5											
1																		
						2	DO	16										
						3	DO	24										
2																		

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309
 LOCATION: N 4913160.01; E 611384.55

RECORD OF BOREHOLE: BH16-11

SHEET 1 OF 1
 DATUM: Geodetic

BORING DATE: October 14, 2016

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH				WATER CONTENT PERCENT					
								Cu, kPa	nat V.	+ rem V.	Q - U	Wp	W	Wi			
								20	40	60	80	10 ⁻⁵	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0		GROUND SURFACE		263.36													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
		(SM) SILTY SAND; orange brown; non-cohesive, dry to moist, very loose		0.15	1	DO	4										
1		(SP) SAND, trace to some silt; light brown; non-cohesive, dry to moist, very loose		0.91	2	DO	4										
		(CL) SILTY CLAY, trace gravel, some sand; grey brown, cohesive, w<PL to w~PL, stiff to very stiff		1.37	3	DO	18										MH
2																	
						4	DO	13									
3																	
		(SW) SAND, trace silt, trace to some gravel; light brown; non-cohesive, dry to moist, dense		260.11	5	DO	32										
				3.25													
4																	
5					6	DO	39										
6		(SM) SILTY SAND; yellow brown; non-cohesive, dry to moist, very dense		257.80													
				5.56													
					7	DO	66										
				256.81													
				6.55													
7		End of Borehole															
		NOTE: 1. Borehole dry upon completion of drilling October 14, 2016.															
8																	
9																	
10																	

DEPTH SCALE

1 : 50



LOGGED: DF
 CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4913009.35; E 611256.26

RECORD OF BOREHOLE: BH16-12

BORING DATE: October 14, 2016

SHEET 1 OF 2
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
								20 40 60 80				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³					
								nat V. + Q - ● rem V. ⊕ U - ○				Wp ----- W ----- WI					
							20	40	60	80		10	20	30	40		
0		GROUND SURFACE		260.76													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
		(SP) SAND, trace to some silt; orange to yellow brown, trace rootlets; non-cohesive, dry to moist, very loose to compact		0.15	1	DO	3										
1					2	DO	10										
		(SC) CLAYEY SAND, trace gravel; grey brown, cobble fragments, (TILL); cohesive, w<PL to w~PL, stiff to hard		259.54													
2					3	DO	14										
				4	DO	19											
3																	
				5	DO	34											
4																	
		(SM) SILTY SAND, trace gravel; grey to light brown; non-cohesive, dry, dense		256.72													
				4.04													
5		(SP) SAND, trace gravel, trace to some silt; light brown, laminated; non-cohesive, dry to wet, dense to very dense		256.04													
				4.72	6	DO	35										
6																	
7																	
					</												

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309
LOCATION: N 4913009.35; E 611256.26

RECORD OF BOREHOLE: BH16-12

BORING DATE: October 14, 2016

SHEET 2 OF 2
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp — W — Wi				
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴		
10		--- CONTINUED FROM PREVIOUS PAGE --- 1. Groundwater measured at a depth of 8.4 m below existing grade upon completion of drilling October 14, 2016.														
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309

LOCATION: N 4913139.92; E 611581.23

RECORD OF BOREHOLE: BH16-13

SHEET 1 OF 1

BORING DATE: October 14, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RESISTANCE, BLOWS/0.3m				k, cm/s																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
								20		40		60		80				10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - U -		● ○				WATER CONTENT PERCENT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
								20	40	60	80																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4912858.35; E 611323.20

RECORD OF BOREHOLE: BH16-14

BORING DATE: October 5, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m												
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			Wp	W
		GROUND SURFACE		260.31															
0	Truck Mount Power Auger 4 1/4" Hollow Stem Auger	(SP) SAND, trace to some silt; orange brown to brown; non-cohesive, dry, loose		0.00	1	DO	7									Concrete Casing			
1		(SM) SILTY SAND, trace gravel; brown to light brown; non-cohesive, dry to moist, compact		259.62 0.69	2	DO	13												
2		(CL) SILTY CLAY, trace gravel, some sand to sandy; grey to brown, (TILL); cohesive, w<PL, stiff to very stiff		258.94 1.37	3	DO	14												
3		(SW) SAND, trace silt, some gravel to gravelly; light brown to orange brown; non-cohesive, dry to moist, dense		257.41 2.90	5	DO	31									Bentonite and Cuttings			
4		(SP) SAND, trace silt; light brown; non-cohesive, moist to wet, compact to very dense		256.35 3.96															
5					6	DO	57												
6																Bentonite #2 Silica Sand November 9, 2016			
7																10 Slot PVC Screen			
8																			

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309

LOCATION: N 4912879.02; E 611587.20

RECORD OF BOREHOLE: BH16-15

SHEET 1 OF 1

BORING DATE: October 6, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m											
								SHEAR STRENGTH				WATER CONTENT PERCENT						
								Cu, kPa				nat V. + Q - rem V. ⊕ U - ●						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
0		GROUND SURFACE		262.14														
	Truck Mount Power Auger Solid Stem Auger	(SP) SAND, some silt; black; non-cohesive, moist, loose		0.00														
				1	DO	5												
		261.45																
		0.69																
1			(ML) sandy SILT, trace to some sand, trace gravel; brown; non-cohesive, moist, compact															
		2																
		260.77																
		1.37																
			(SP/SM) SAND, trace silt to silty, trace to some gravel; grey brown to light brown; non-cohesive, dry to moist, compact to very dense															
	3	DO			29													
2																		
	4	DO			48													
3																		

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309

LOCATION: N 4912968.04; E 611875.92

RECORD OF BOREHOLE: BH16-16

BORING DATE: October 12, 2016

SHEET 1 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RESISTANCE, BLOWS/0.3m				k, cm/s					
								SHEAR STRENGTH Cu, kPa		nat V. + Q - ● rem V. ⊕ U - ○		WATER CONTENT PERCENT					
												Wp — W — Wi					
							20	40	60	80		10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0		GROUND SURFACE		262.11													
	Truck Mount Power Auger 4 1/4" Hollow Stem Auger	TOPSOIL		0.00													
		(SP) SAND, trace silt to silty; light brown; non-cohesive, dry to moist, very loose to loose		0.15	1	DO	5										
1			2	DO	6												
			3	DO	2												
2			(SP) SAND, trace silt, trace gravel; light brown; non-cohesive, dry to moist, very dense		259.98												
				2.13	4	DO	62										
3			5	DO	54												
4																	
5			6	DO	59												
6		(SM) SILTY SAND; light brown to grey; non-cohesive, dry to moist, dense to very dense		256.55													
			5.56														
7																	
8			7	DO	50/ 127 mm												
9			8	DO	47												
		(SP) SAND, trace to some silt; light brown; non-cohesive, dry to moist, very dense		253.50													
			8.61														
			9	DO	58												
		End of Borehole		252.51													
		9.60															
10		NOTES:															
		CONTINUED NEXT PAGE															

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4912968.04; E 611875.92

RECORD OF BOREHOLE: BH16-16

BORING DATE: October 12, 2016

SHEET 2 OF 2
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ●		WATER CONTENT PERCENT Wp — W — Wi				
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴		
10		--- CONTINUED FROM PREVIOUS PAGE --- 1. Borehole dry upon completion of drilling October 12, 2016. 2. Monitoring well dry on November 9, 2016.														
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309

LOCATION: N 4912643.42; E 611289.45

RECORD OF BOREHOLE: BH16-17

SHEET 1 OF 1

BORING DATE: October 5, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT							
								20	40	60	80	nat V. rem V.	+ ⊕	Q - U -	● ○			10 ⁻⁶	10 ⁻⁵
								20	40	60	80								
0		GROUND SURFACE		262.42															
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		262.00 0.42															
		(SP) SAND, trace silt; orange brown, oxidation; non-cohesive, dry to moist, loose		0.18	1	DO	5												
1			(SM) SILTY SAND, trace to some gravel; brown to grey, (TILL); non-cohesive, moist, compact to very dense		261.35 1.07	2A	DO	12											
						2B													
						3	DO	18											
2						4	DO	35											
3					5	DO	74												
4																			
5		pockets of clay in Sample 6			6	DO	36												
		(SP) SAND, trace silt; light brown; non-cohesive, dry to moist, very dense		256.93 5.49															
6																			
					7	DO	90												
7		End of Borehole		255.87 6.55															
		NOTE: 1. Borehole dry upon completion of drilling October 5, 2016.																	
8																			
9																			
10																			

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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LOCATION: N 4912709.68: E 611486.49

BORING DATE: October 6, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

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1 : 50



CHECKED: NL

PROJECT: 1661309
LOCATION: N 4912808.11; E 611777.02

RECORD OF BOREHOLE: BH16-19

BORING DATE: October 12, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION								
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT													
								20		40		60		80				10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³	
								nat V. + rem V. ⊕		Q - ● U - ○		Wp		W				WI							
0		GROUND SURFACE		261.32				20	40	60	80	10	20	30	40										
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00																					
		(SM) SILTY SAND, trace to some gravel; grey, (TILL); non-cohesive, dry, compact to dense		0.08	1	DO	10																		
1					2	DO	31						○												
		(ML) sandy SILT, trace to some gravel; light brown to grey, cobble fragments, (TILL); non-cohesive, moist, dense to very dense		259.95																					
				1.37	3	DO	35							○			M								
2					4	DO	60							○											
3			(SP) SAND, trace to some silt, trace to some gravel; brown to grey; non-cohesive, dry to moist, dense		258.27	5	DO	35						○											
					3.05																				
4																									
5		laminated in Sample 6			6	DO	43						○												
6																									
7		End of Borehole		254.77	7	DO	50						○												
		NOTE: 1. Borehole dry upon completion of drilling October 12, 2016.		6.55																					
8																									
9																									
10																									

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4912492.87; E 611250.15

RECORD OF BOREHOLE: BH16-20

BORING DATE: October 5, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION								
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT													
								20		40		60		80				10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³	
								nat V. + rem V. -		Q - U -		● ○		Wp				W		WI					
0	Truck Mount Power Auger Solid Stem Auger	GROUND SURFACE		263.59				20	40	60	80	10	20	30	40										
		TOPSOIL		0.00																					
		(SP) SAND, trace silt; orange brown; non-cohesive, dry to moist, loose		0.15	1	DO	5																		
1		(ML) sandy SILT, trace gravel, some plastic fines; grey brown; non-cohesive, moist, compact		0.69	2	DO	12							○											
		(SP) SAND, trace silt to silty, trace to some gravel, some plastic fines; light brown to brown; non-cohesive, moist, compact to very dense		1.37	3	DO	16							○											
2																									
						4	DO	38							○										
3					5	DO	54							○											
4																									
5																									
6																									
7																									
8																									
9																									
10																									
		End of Borehole		257.04 6.55																					
7		NOTE: 1. Borehole dry upon completion of drilling October 5, 2016.																							
8																									
9																									
10																									

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309

LOCATION: N 4912620.15; E 611673.78

RECORD OF BOREHOLE: BH16-21

SHEET 1 OF 2

BORING DATE: October 6, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT						
								20 40 60 80				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³						
								nat V. + Q - rem V. ⊕ U - ●				Wp — W — WI						
0	Truck Mount Power Auger Solid Stem Auger	GROUND SURFACE		263.98														
		TOPSOIL		0.00 263.78														
		(SP) SAND, trace silt; orange brown, oxidation; non-cohesive, dry to moist, loose		0.20	1	DO	8										Concrete Casing	
1		(SC) CLAYEY SAND, trace to some gravel; grey brown, (TILL); cohesive, w<PL to w~PL, stiff to hard		263.07 0.91	2	DO	9											
2																		
3																	Bentonite and Cuttings	
4			(SP) SAND, trace to some silt, trace to some gravel; light brown; non-cohesive, dry to moist, dense to very dense		260.63 3.35	5A 5B	DO	34										
5																		
6																Bentonite		
																#3 Silica Sand		
7		laminated in Sample 7																
8		(ML) sandy SILT; grey brown; non-cohesive, moist, very dense		256.89 7.09														

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309

LOCATION: N 4912620.15; E 611673.78

RECORD OF BOREHOLE: BH16-21

SHEET 2 OF 2

BORING DATE: October 6, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. U -		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
10		--- CONTINUED FROM PREVIOUS PAGE ---															
		1. Borehole dry upon completion of drilling October 6, 2016. 2. Monitoring well dry on November 9, 2016.															
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4912775.41; E 611921.19

RECORD OF BOREHOLE: BH16-22

BORING DATE: October 12, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. U -		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
0		GROUND SURFACE		261.12													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
		(SM) SILTY SAND, trace gravel; orange brown; non-cohesive, dry to moist, very loose		260.82 0.30	1	DO	4										
1		(CL) SILTY CLAY, some sand; brown grey; cohesive, w<PL, stiff to very stiff		260.21 0.91	2A 2B	DO	12										
2																	
		(SP) SAND, trace gravel, trace to some silt; light brown; non-cohesive, dry to moist, compact to dense		258.99 2.13	4	DO	24										
3																	
4																	
5		laminated in Sample 6			6	DO	25										
6																	
7		End of Borehole		254.57 6.55													
		NOTE: 1. Borehole dry upon completion of drilling October 12, 2016.															
8																	
9																	
10																	

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4912346.27; E 611272.19

RECORD OF BOREHOLE: BH16-23

BORING DATE: October 5, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. U -		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0		GROUND SURFACE		261.72													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
				261.26	1	DO	4										
		(SP) SAND, trace silt; orange brown; non-cohesive, dry to moist, very loose		0.46													
		(SC) CLAYEY SAND, trace to some gravel; grey, (TILL); cohesive, w~PL, stiff to hard		0.61													
1					2	DO	14										
					3	DO	22										
2																	
					4	DO	36										
3					5	DO	56										
4																	
5					6	DO	45										
6																	
7		End of Borehole		255.17 6.55													
		NOTE: 1. Borehole dry upon completion of drilling October 5, 2016.															
8																	
9																	
10																	

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309
 LOCATION: N 4912504.46; E 611403.58

RECORD OF BOREHOLE: BH16-24

BORING DATE: October 5, 2016

SHEET 1 OF 1
 DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m											
								SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT						
												Wp — W — WI						
		GROUND SURFACE		265.40				20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
0	Truck Mount Power Auger Solid Stem Auger	FILL-(GP) SAND and GRAVEL, trace silt; light brown to brown; non-cohesive, dry to moist, loose to compact		0.00	1	DO	7											
1																		
				2	DO	27												
2		(SW) gravelly SAND, trace silt; light brown; non-cohesive, dry to moist, compact		264.03														
				1.37	3	DO	30											
3		(ML) CLAYEY SILT and SAND, trace gravel; brown to greyish brown, (TILL); cohesive, w<PL, hard		262.91	4A	DO	51											
				2.49	4B													
4																		
		5	DO	42														
5																		
		6	DO	85														
6																		
		7	DO	78														
7		End of Borehole		258.85														
				6.55														
7		NOTE: 1. Borehole dry upon completion of drilling October 5, 2016.																
8																		
9																		
10																		

DEPTH SCALE
 1 : 50



LOGGED: DF
 CHECKED: NL

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PROJECT: 1661309

LOCATION: N 4912481.27; E 611563.38

RECORD OF BOREHOLE: BH16-25

SHEET 1 OF 1

BORING DATE: October 6, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT					
								Cu, kPa		nat V. + Q - rem V. ⊕ U - ●							
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0	Truck Mount Power Auger Solid Stem Auger	GROUND SURFACE		264.75													
		TOPSOIL		0.00 264.55	1A												
		(CL) SILTY CLAY, trace gravel; brown, (TILL); cohesive, w<PL, stiff		0.20	1B	DO	10										
				264.06													
		(SM) SILTY SAND, trace to some gravel; grey brown, (TILL); non-cohesive, moist, dense to very dense		0.69	2	DO	42										
1																	
2																	
3		(SM) SILTY SAND, some silt to silty, some gravel; brown to grey or light brown; non-cohesive, dry to moist, very dense		261.85 2.90	5	DO	50/ 51 mm										
4																	
5																	
6																	

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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LOCATION: N 4912586.60; E 611807.22

RECORD OF BOREHOLE: BH16-26

BORING DATE: October 11, 2016

SHEET 1 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

[illegible]

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GIN\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309
LOCATION: N 4912586.60; E 611807.22

RECORD OF BOREHOLE: BH16-26

BORING DATE: October 11, 2016

SHEET 2 OF 2
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. U -		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
10		--- CONTINUED FROM PREVIOUS PAGE --- 1. Borehole dry upon completion of drilling October 11, 2016.															
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

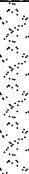
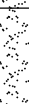
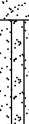
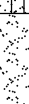
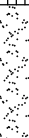
PROJECT: 1661309
LOCATION: N 4912723.96; E 612081.67

RECORD OF BOREHOLE: BH16-27

BORING DATE: October 12, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m											
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ⊙		WATER CONTENT PERCENT						
								20	40	60	80	10 ⁻⁵	10 ⁻⁵	10 ⁻⁴			10 ⁻³	Wp
		GROUND SURFACE		259.45				20	40	60	80	10	20	30	40			
0	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		259.00 0.45														
		(SP) SAND, trace silt to silty; brown to light brown or orange brown; non-cohesive, dry to moist, very loose to loose		0.18	1	DO	4											
1						2	DO	7					○					
		(SW) SAND, some silt to silty, trace to some gravel; light brown; non-cohesive, dry to moist, dense		258.08 1.37		3	DO	32						○				
2																		
		(SM) SILTY SAND; light brown, laminated; non-cohesive, dry to moist, dense		257.32 2.13		4	DO	46							○			
3																		
		(SW) SAND, trace gravel to gravelly, trace to some silt; light brown; non-cohesive, dry to moist, very dense		256.55 2.90		5	DO	61							○			
4																		
5							6	DO	57						○			
6																		
7		(ML) SILT, some clay, some sand to sandy; brown; cohesive, w~PL to w>PL, very stiff		253.20 6.25		7A 7B	DO	24						○		○		
		(SW) SAND, trace silt, some gravel; light brown, laminated; non-cohesive, moist, very dense		252.36 7.09														
8						8	DO	80						○				
		End of Borehole		251.37 8.08														
9		NOTE: 1. Groundwater measured at a depth of 7.0 m below existing grade upon completion of drilling October 12, 2016.																
10																		

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309

LOCATION: N 4912259.14; E 611384.84

RECORD OF BOREHOLE: BH16-28

SHEET 1 OF 1

BORING DATE: October 5, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT								
								nat V. + Q - rem V. ⊕ U - ○												
		GROUND SURFACE		260.82				20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³					
0	Truck Mount Power Auger 4 1/4" Hollow Stem Auger	TOPSOIL		0.00	1	DO	4										Concrete Casing			
		(ML) sandy SILT, trace gravel to gravelly, some plastic fines; grey brown, (TILL); non-cohesive, dry to moist, compact to dense		260.21 0.61																
1					2	DO	13													
					3	DO	15													
2						4	DO	35										Bentonite and Cuttings		
		(SM) SILTY SAND, some gravel to gravelly; brown to light brown; non-cohesive, dry to moist, dense		257.57 3.25																
3					5A															
					5B	DO	43													
4																			Bentonite	
		trace to no gravel in Sample 6		255.18 5.64																
5	6				DO	43														
6		(SP) SAND, trace silt; light brown; non-cohesive, wet, compact		254.27 6.55	7	DO	29											10 Slot PVC Screen November 9, 2016		
7	End of Borehole NOTES: 1. Groundwater measured at a depth of 5.8 m below existing grade upon completion of drilling October 5, 2016. 2. Groundwater measured in monitoring well at a depth of 5.6 m below existing grade on November 9, 2016.																			
8																				
9																				
10																				

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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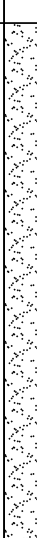
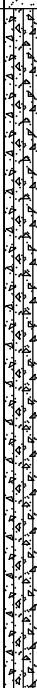
PROJECT: 1661309
LOCATION: N 4912310.49; E 611545.68

RECORD OF BOREHOLE: BH16-29

BORING DATE: October 5, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION						
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT											
								20		40		60		80				10 ⁻⁵		10 ⁻⁴		10 ⁻³	
								20		40		60		80				10		20		30	
0		GROUND SURFACE		265.95																			
	Truck Mount Power Auger Solid Stem Auger	(SW) gravelly SAND, trace silt; brown, cobble fragments; non-cohesive, dry to moist, loose to dense		0.00																			
				1	DO	9																	
1				2	DO	3																	
		3	DO	18																			
2																							
		4	DO	37																			
3																							
		(SM) SILTY SAND, some gravel; grey to brown, cobble fragments, (TILL); non-cohesive, dry to moist, compact to very dense		262.44																			
	5			DO	26																		
4																							
	6			DO	12																		
5																							
6																							
7																							
8																							
		End of Borehole		257.87																			
		NOTE: 1. Borehole dry upon completion of drilling October 5, 2016.		8.08																			
9																							
10																							

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

LOCATION: N 4912310.08; E 611672.23

RECORD OF BOREHOLE: BH16-30

BORING DATE: October 7, 2016

SHEET 1 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

[illegible]

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4912310.08; E 611672.23

RECORD OF BOREHOLE: BH16-30

BORING DATE: October 7, 2016

SHEET 2 OF 2
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp — W — Wi			
								20	40	60	80	10 ⁻⁶	10 ⁻⁵		
10		--- CONTINUED FROM PREVIOUS PAGE --- 1. Groundwater measured at a depth of 8.5 m below existing grade upon completion of drilling October 7, 2016. 2. Groundwater measured in monitoring well at a depth of 8.0 m below existing grade on November 9, 2016.													
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

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PROJECT: 1661309
LOCATION: N 4912388.98; E 611739.40

RECORD OF BOREHOLE: BH16-31

BORING DATE: October 7, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m												
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			Wp	W
0		GROUND SURFACE		261.40															
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00															
		(SP) SAND, trace silt; light brown to orange brown, cobble fragments; non-cohesive, dry to moist, very loose		0.15	1	DO	4												
1				260.38	2A	DO	2												
		(SM) SILTY SAND; grey to light brown; non-cohesive, moist, compact to very dense		1.02	2B														
2							3	DO	12										
3					4	DO	38												
4				5	DO	53													
5		laminated in Sample 6			6	DO	60												
6																			
7		(SP) SAND, trace to some silt; light brown, laminated; non-cohesive, moist to wet, dense to very dense		255.15	7A	DO	51												
				6.25	7B														
8																			

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309

LOCATION: N 4912494.42; E 611762.49

RECORD OF BOREHOLE: BH16-32

SHEET 1 OF 2

BORING DATE: October 11, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RESISTANCE, BLOWS/0.3m				CONDUCTIVITY, k, cm/s						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
								SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT Wp ———— W ———— Wi						
								20	40	60	80	10	20	30	40			
0	Truck Mount Power Auger Solid Stem Auger	GROUND SURFACE		262.39														
		TOPSOIL		0.00														
		(SP) SAND, trace to some silt; orange brown; non-cohesive, dry to moist, very loose		0.15	1	DO	4											
				261.70														
1		(SM) SILTY SAND; grey; non-cohesive, dry to moist, very loose		0.69	2	DO	2											
				260.71														
				1.68	3	DO	4											
2		(SP) SAND, trace to some silt; light brown; non-cohesive, dry to moist, very loose to compact			4	DO	23											
				259.65														
				2.74	5	DO	53											
3		(SM) SILTY SAND; grey to light brown; non-cohesive, dry to moist, very dense																
				258.35														
				4.04	6	DO	53											
4	(SP) SAND, trace silt; light brown to grey, laminated; non-cohesive, dry to wet, very dense																	

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE02 DATA\INT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309
LOCATION: N 4912494.42; E 611762.49

RECORD OF BOREHOLE: BH16-32

BORING DATE: October 11, 2016

SHEET 2 OF 2
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp — W — Wi				
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴		
10		--- CONTINUED FROM PREVIOUS PAGE --- 1. Groundwater measured at a depth of 8.5 m below existing grade upon completion of drilling October 11, 2016.														
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309
LOCATION: N 4912587.55; E 611967.37

RECORD OF BOREHOLE: BH16-33

BORING DATE: October 11, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ⊙		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
		GROUND SURFACE		260.82				20	40	60	80	10	20	30	40		
0	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00													
		(SP) SAND, trace to some silt, trace gravel; brown to light brown; non-cohesive, dry to moist, very loose to dense		0.13	1	DO	4										
1																	
2																	
3		(SM) SILTY SAND, trace silt to silty, trace to some gravel; light brown, laminated; non-cohesive, dry to moist, dense		257.92 2.90													
				257.62 3.20	5A												
		(SW) gravelly SAND, trace silt; light brown, laminated; non-cohesive, dry to moist, very dense				DO	52										
						5B											
4		(SM) SILTY SAND, trace to some gravel; light brown; non-cohesive, dry, dense		256.78 4.04													
5		(SP) SAND, trace silt, trace gravel; light brown; non-cohesive, dry to moist, dense to very dense		255.94 4.88													
6																	

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309
LOCATION: N 4912423.06; E 612004.88

RECORD OF BOREHOLE: BH16-34

BORING DATE: October 11, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m											
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ⊙		WATER CONTENT PERCENT						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			Wp
		GROUND SURFACE		259.98				20	40	60	80	10	20	30	40			
0	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		0.00														
		(SM) SILTY SAND; brown to orange brown; non-cohesive, moist, very loose		0.15	1	DO	4											
1						2	DO	3						○				
					258.61													
		(SP) SAND, trace to some silt; light brown; non-cohesive, dry to moist, compact to dense		1.37											○			
2						3	DO	21										
						4	DO	32							○			
3					257.08													
			(SM) SILTY SAND; light brown; non-cohesive, dry, dense		2.90											○		
			(SP) SAND, trace silt; light brown; non-cohesive, moist, dense		256.70	5A												
					3.28	5B	DO	40							○			
4					256.09													
		(SM) SILTY SAND; light brown; non-cohesive, dry, dense		3.89														
5				255.20	6A										○			
		(SP) SAND, trace silt; light brown; non-cohesive, moist, dense		4.78	6B	DO	41											
6				254.42														
		(SM) SILTY SAND; light brown; non-cohesive, dry, dense		5.56														
7				253.43	7	DO	38								○			
		End of Borehole		6.55												M		
7		NOTE: 1. Groundwater measured at a depth of 5.6 m below existing grade upon completion of drilling October 11, 2016.																
8																		
9																		
10																		

DEPTH SCALE

1 : 50



LOGGED: DF
CHECKED: NL

PROJECT: 1661309

LOCATION: N 4912567.34; E 612124.98

RECORD OF BOREHOLE: BH16-35

SHEET 1 OF 1

BORING DATE: October 11, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
								nat V. + Q - ● rem V. ⊕ U - ○				Wp — W — WI					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0		GROUND SURFACE		258.32													
	Truck Mount Power Auger Solid Stem Auger	TOPSOIL		258.00													
		(SP) SAND, some silt to silty; light brown, rootlets; non-cohesive, dry to moist, very loose to compact		258.14	1	DO	4										
1				0.18													
2		(SP) SAND trace silt; light brown to grey, laminated; non-cohesive, dry to moist, compact		256.19	4	DO	29										
				2.13													
3		(SM) SILTY SAND; light brown to grey; non-cohesive, dry to moist, compact to dense		255.25	5	DO	26										
				3.07													
4																	
5		(SP) SAND, trace silt; light brown, laminated; non-cohesive, dry to moist, dense		253.52	6A	DO	43										
				4.80	6B												
6		(SM) SILTY SAND; light brown, laminated; non-cohesive, moist to wet, dense		252.76													
				5.56													

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

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PROJECT: 1661309

LOCATION: N 4912297.98; E 611773.63

RECORD OF BOREHOLE: BH16-36

SHEET 1 OF 1

BORING DATE: October 4, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m											
								SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT						
												Wp — W — Wi						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
								nat V. + Q - ●										
								rem V. ⊕ U - ○										
0		GROUND SURFACE		261.26 0.00														
	Truck Mount Power Auger Solid Stem Auger	FILL-(SW) gravelly SAND, some silt; dark brown to brown; non-cohesive, dry to moist, compact			1	DO	26											
		(SP) SAND, trace to some silt, trace to some gravel; light brown to brown, laminated; non-cohesive, moist to wet, loose to dense																
1				2	DO	11												
				3	DO	9												
2																		
				4	DO	29												
3					5	DO	25											
4																		
5					6	DO	33											
6																		
7																		
8																		
									</									

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309

LOCATION: N 4912357.00; E 611947.16

RECORD OF BOREHOLE: BH16-37

SHEET 1 OF 1

BORING DATE: October 4, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT									
								20	40	60	80	nat V. rem V.	+ ⊕	Q - U -	● ○			10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³			
												Wp -----○----- Wl									
		GROUND SURFACE		259.32																	
0	Truck Mount Power Auger Solid Stem Auger	FILL-SAND and GRAVEL		0.00	1A																
		FILL-(SW) SAND, some gravel, some silt; brown; non-cohesive, moist, loose		0.15	1B	DO	6														
1						2	DO	4						○							
		(SW) SAND, trace silt, trace gravel to gravelly, medium to coarse grained; light brown, laminated; non-cohesive, moist, loose to compact		257.95																	
2						3	DO	9							○						
						4	DO	14							○						
3																					
					5	DO	22							○							
4																					
5					6	DO	25							○							
6		(SP) SAND, trace silt; light brown, laminated; non-cohesive, wet, compact		253.68 5.64																	
					7	DO	13							○							
7																					
8		(CL) SILTY CLAY; grey; cohesive, w~PL, stiff		251.55 7.77	8A	DO	15														
				251.24 8.08	8B																
		End of Borehole																			
		NOTE: 1. Groundwater measured at a depth of 5.3 m below existing grade upon completion of drilling October 4, 2016.																			
9																					
10																					

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\INT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309

LOCATION: N ; E

RECORD OF BOREHOLE: BH16-38

SHEET 1 OF 1

BORING DATE: October 4, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	RESISTANCE, BLOWS/0.3m				k, cm/s						
								SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ●		WATER CONTENT PERCENT						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
0		GROUND SURFACE																
	Truck Mount Power Auger Solid Stem Auger	FILL-(SW) SAND, trace to some silt; greyish brown to light brown; non-cohesive, moist, very loose to loose		0.00	1A	DO	6											
				1B														
1					2	DO	2											
		(SW) SAND, trace gravel to gravelly, trace to some silt; brown; non-cohesive, moist to wet, very loose to very dense		1.37														
				3	DO	13												
2																		
				4	DO	11												
3																		
				5	DO	2												
4																		
	6			DO	37													
5		gravelly in Sample 6																
6																		
7																		
8																		
		End of Borehole		8.08														
9		NOTE: 1. Groundwater measured at a depth of 5.9 m below existing grade upon completion of drilling October 4, 2016.																
10																		

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309

LOCATION: N 4912425.87; E 612149.17

RECORD OF BOREHOLE: BH16-39

SHEET 1 OF 1

BORING DATE: October 4, 2016

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³						
								SHEAR STRENGTH Cu, kPa				nat V. + Q - ● rem V. ⊕ U - ○						WATER CONTENT PERCENT			
																		Wp — W — Wi			
								20	40	60	80	10	20	30	40						
0		GROUND SURFACE		256.62																	
	Truck Mount Power Auger Solid Stem Auger	FILL-(SM) SILTY SAND, some gravel; orange brown; non-cohesive, moist, loose		0.00	1	DO	9														
				256.01																	
1		FILL-(SW) SAND, trace to some silt, trace to some gravel; orange brown to light brown; non-cohesive, moist, loose		0.61	2	DO	4						○								
				255.25																	
		(SW) SAND, trace to some silt, trace to some gravel; brown; non-cohesive, moist, loose		1.37	3	DO	9						○								
2				254.49																	
		(ML) sandy CLAYEY SILT; grey brown; cohesive, w~PL, very stiff		2.13	4	DO	16							○			MH				
				253.72																	
3		(SM) SILTY SAND, trace gravel; grey brown to grey; non-cohesive, moist, compact		2.90	5	DO	29							○							
4																					
5																					
					6	DO	22						○								
6		(CL) SILTY CLAY; grey, sand seams; cohesive, w<PL, hard		5.64																	
					7	DO	34							○							
7		(SP) SAND, some silt; grey, laminated; non-cohesive, moist to wet, compact		6.86																	
8					8	DO	26							○							
		End of Borehole		8.08																	
9		NOTE: 1. Groundwater measured at a depth of 5.0 m below existing grade upon completion of drilling October 4, 2016.																			
10																					

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\INT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

LOCATION: N 4912565.47; E 612274.35

RECORD OF BOREHOLE: BH16-40

BORING DATE: October 12, 2016

SHEET 1 OF 1

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

[illegible]

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GIN\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

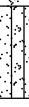
PROJECT: 1661309
LOCATION: N 4912594.48; E 612012.17

RECORD OF BOREHOLE: BH16-41

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: October 11, 2016

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m										
								SHEAR STRENGTH Cu, kPa		nat V. + Q - ● rem V. ⊕ U - ○		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
								20	40	60	80	10	20	30	40		
0	Truck Mount Power Auger Solid Stem Auger	GROUND SURFACE		260.42													
		TOPSOIL		0.00													
		(SP) SAND, trace silt; orange brown; non-cohesive, dry to moist, loose		0.15	1	DO	4										
1					2	DO	5										
				259.05													
		(SM) SILTY SAND; light brown to grey; non-cohesive, moist, compact		1.37													
				258.44	3	DO	17										
2		End of Borehole		1.98													
		NOTE: 1. Borehole dry upon completion of drilling October 11, 2016.															
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



LOGGED: DF

CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB

PROJECT: 1661309
LOCATION: N 4912607.98; E 612083.80

RECORD OF BOREHOLE: BH16-42

BORING DATE: October 11, 2016

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. U -		WATER CONTENT PERCENT Wp — W — Wi			
								20	40	60	80	10 ⁻⁶	10 ⁻⁵		
0	Truck Mount Power Auger Solid Stem Auger	GROUND SURFACE		258.22 0.00											
		TOPSOIL			1	DO	4								
		(CL) SILTY CLAY, trace sand to sandy; brown; cohesive, w<PL to w~PL, stiff		257.61 0.61											
1			2	DO	12										
2															
		End of Borehole		256.24 1.98											
		NOTE: 1. Borehole dry upon completion of drilling October 11, 2016.													
3															
4															
5															
6															
7															
8															
9															
10															

DEPTH SCALE
1 : 50



LOGGED: DF
CHECKED: NL

GTA-BHS 001 S:\CLIENTS\LM HOLDINGS\BARRIE\02 DATA\GINT\1661309-BG-0001.GPJ GAL-MIS.GDT 12-20-16 STB



**PRELIMINARY GEOTECHNICAL INVESTIGATION
LM BLUESKY - PROPOSED RESIDENTIAL DEVELOPMENT,
BARRIE, ONTARIO**

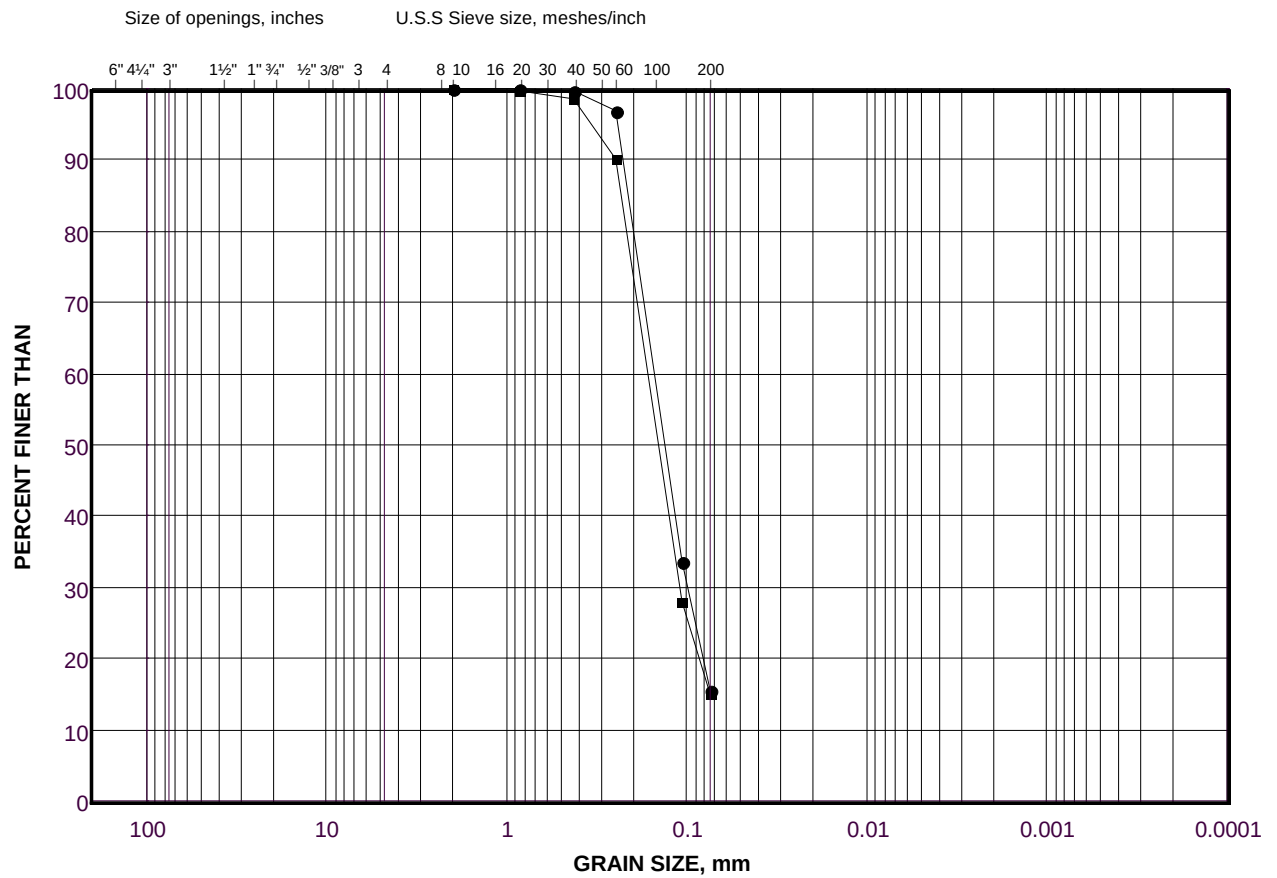
APPENDIX B

Laboratory Test Results

GRAIN SIZE DISTRIBUTION

SILTY SAND

FIGURE B1



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	BH16-6	8	7.62 - 8.23
■	BH16-34	Sa 7	6.10 - 6.71

Project Number: 1661309

Checked By: NLP

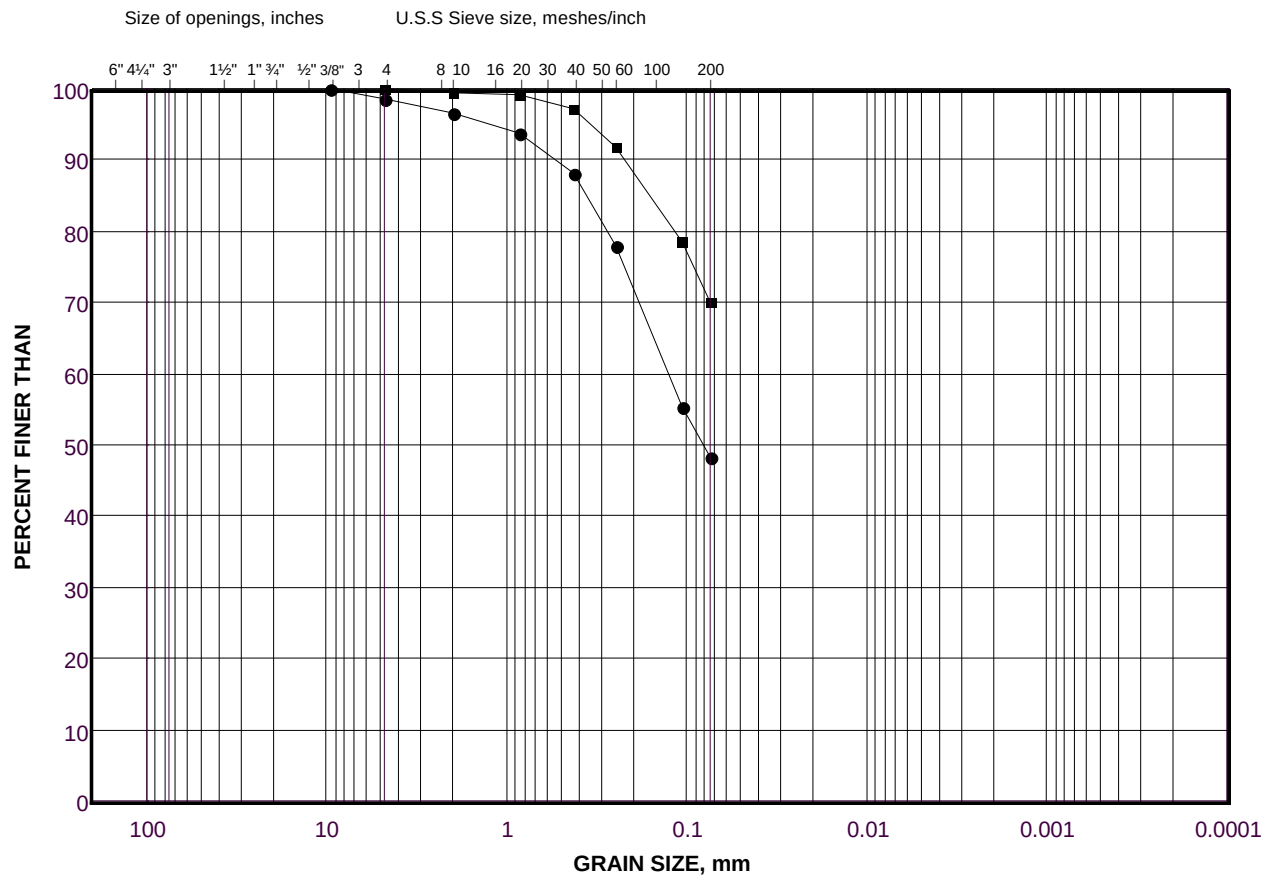
Golder Associates

Date: 09-Dec-16

GRAIN SIZE DISTRIBUTION

Sandy SILT to SAND and SILT

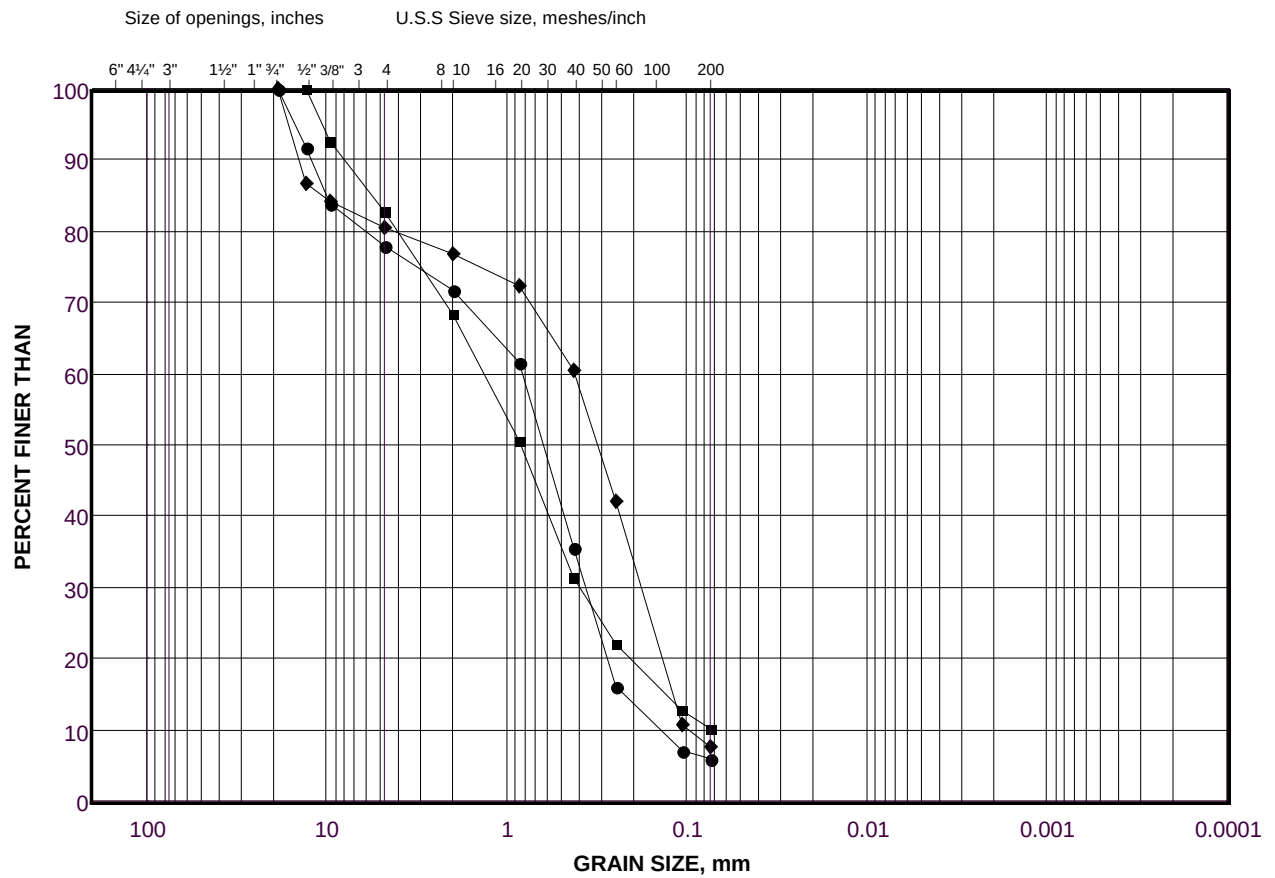
FIGURE B2



GRAIN SIZE DISTRIBUTION

GRAVELLY SAND

FIGURE B3



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	BH16-29	Sa 2	0.76 - 1.37
■	BH16-3	Sa 3	1.52 - 2.13
◆	BH16-33	Sa 5b	3.20 - 3.66

Project Number: 1661309

Checked By: NLP

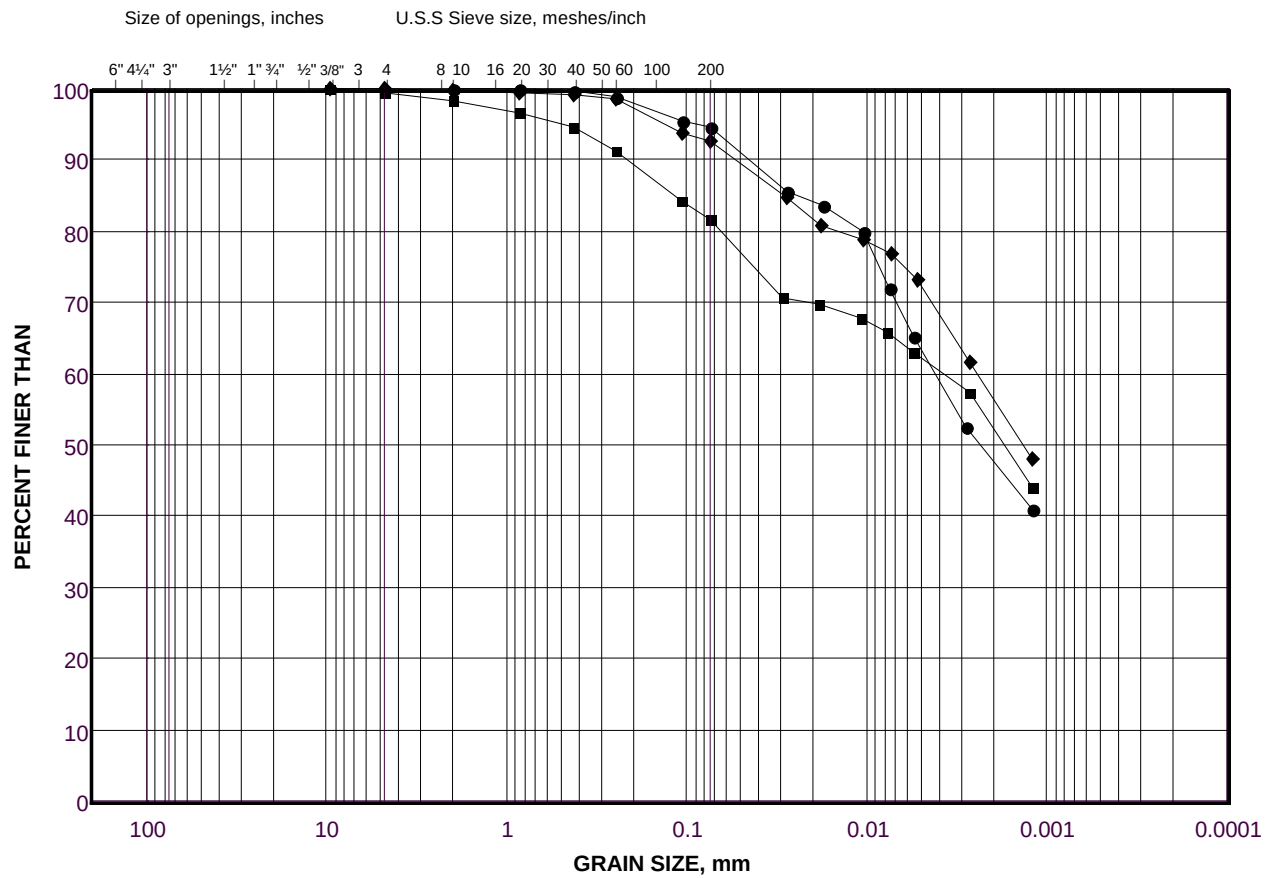
Golder Associates

Date: 09-Dec-16

GRAIN SIZE DISTRIBUTION

SILTY CLAY

FIGURE B4



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES FINE GRAINED
	GRAVEL SIZE		SAND SIZE			

LEGEND

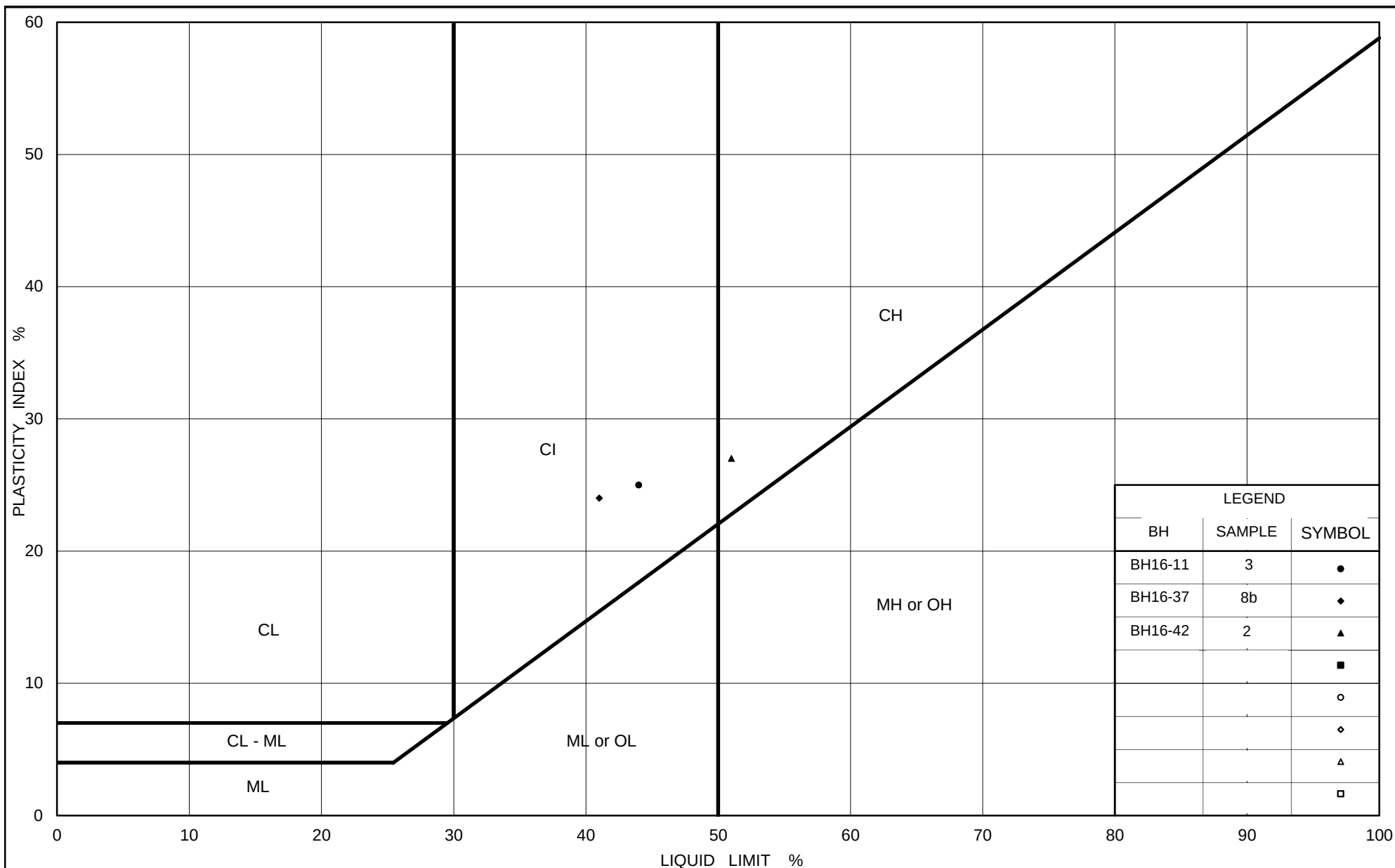
SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	BH16-42	2	0.76 - 1.37
■	BH16-11	3	1.52 - 2.13
◆	BH16-37	8b	7.74 - 8.23

Project Number: 1661309

Checked By: NLP

Golder Associates

Date: 09-Dec-16



PLASTICITY CHART SILTY CLAY

Figure No. B5

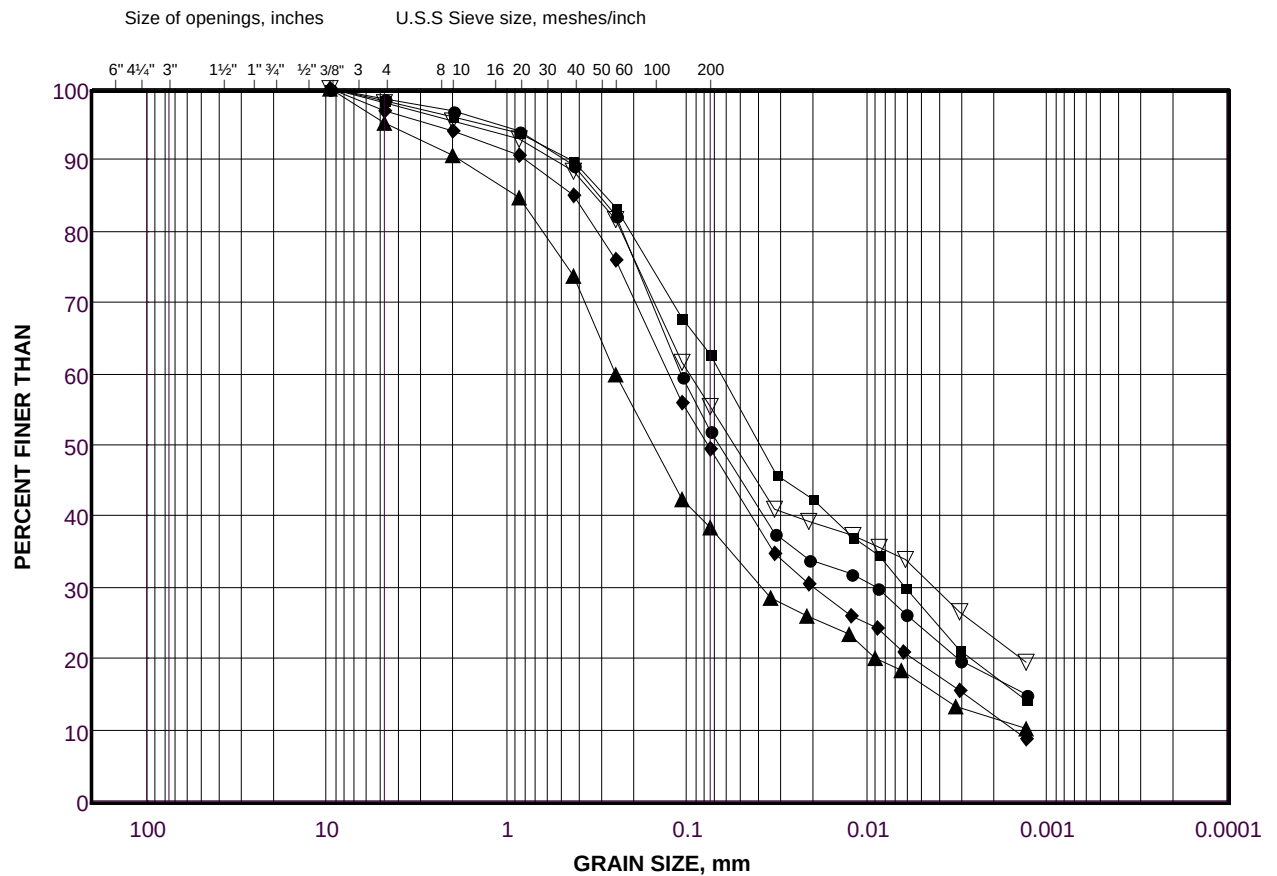
Project No. 1525357

Checked By: NLP

GRAIN SIZE DISTRIBUTION

CLAYEY SAND TILL

FIGURE B6



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

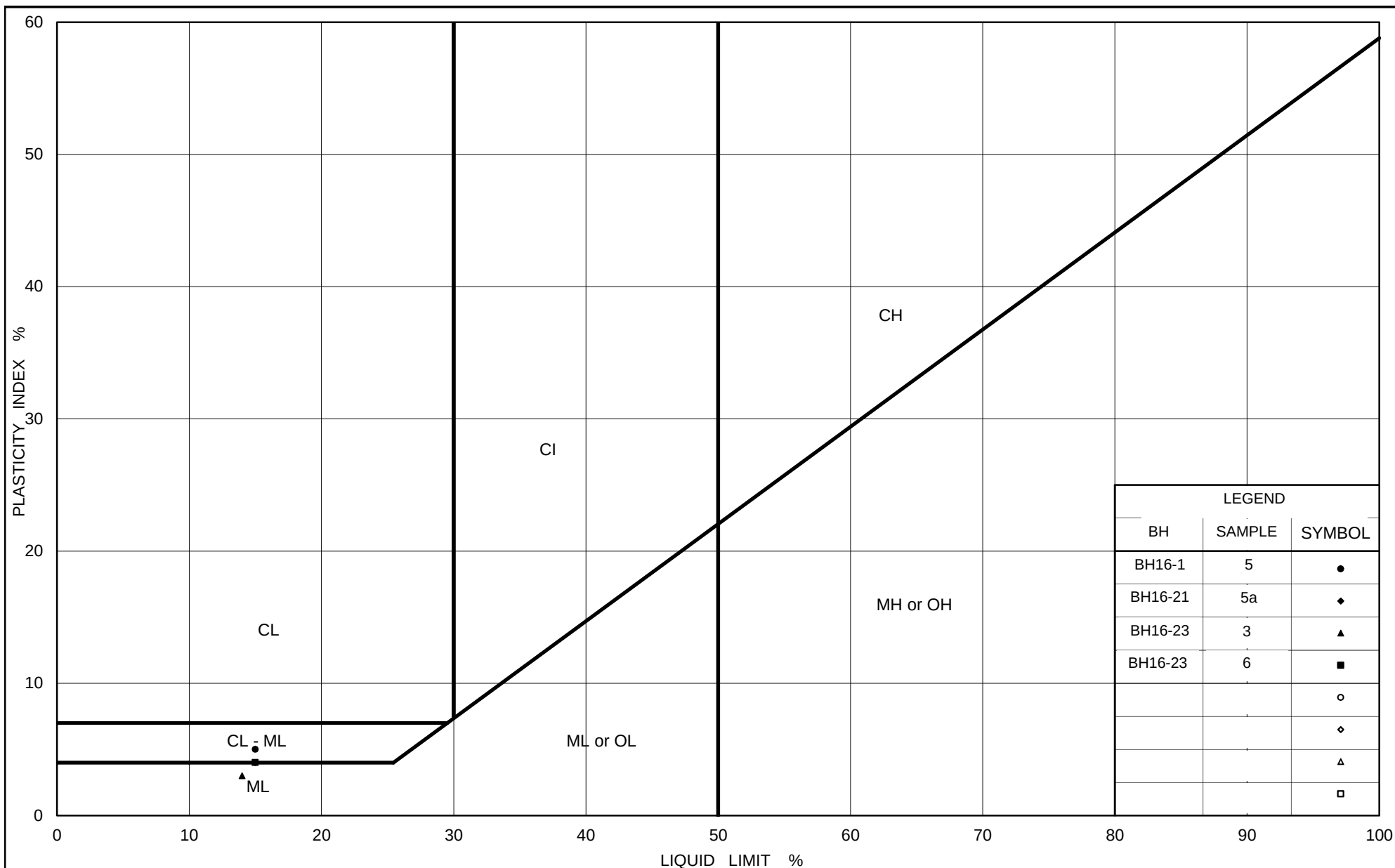
SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	BH16-9	4	2.29 - 2.90
■	BH16-12	4	2.29 - 2.90
◆	BH16-1	5	3.05 - 3.66
□	BH16-21	5a	3.05 - 3.35
•	BH16-24	7	6.10 - 6.71

Project Number: 1661309

Checked By: NLP

Golder Associates

Date: 09-Dec-16



PLASTICITY CHART CLAYEY SAND TILL

Figure No. B7

Project No. 1525357

Checked By: NLP



**PRELIMINARY GEOTECHNICAL INVESTIGATION
LM BLUESKY - PROPOSED RESIDENTIAL DEVELOPMENT,
BARRIE, ONTARIO**

APPENDIX C

Analytical Laboratory Results

CLIENT NAME: GOLDER ASSOCIATES LTD.
121 COMMERCE PARK DRIVE, UNIT L
BARRIE, ON L4N8X1
(705) 722-4492

ATTENTION TO: Nick LaPosta

PROJECT: 1661309

AGAT WORK ORDER: 16T150001

SOIL ANALYSIS REVIEWED BY: Elizabeth Polakowska, MSc (Animal Sci), PhD (Agri Sci), Inorganic Lab
Supervisor

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Oct 25, 2016

PAGES (INCLUDING COVER): 18

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2016-10-18

DATE REPORTED: 2016-10-25

		SAMPLE DESCRIPTION:		BH16-15-1	DUP 1	16-17-1	16-28-1	16-25-1	16-34-1	16-22-1	16-5-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016
Parameter	Unit	G / S	RDL	7940086	7940113	7940138	7940166	7940174	7940182	7940205	7940260
Antimony	µg/g	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	1	<1	<1	<1	<1	1	1	<1	1	2
Barium	µg/g	2	29	38	43	43	61	19	69	140	
Beryllium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7
Boron	µg/g	5	<5	<5	<5	<5	6	<5	7	11	
Boron (Hot Water Soluble)	µg/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	2	8	11	9	9	12	10	19	25	
Cobalt	µg/g	0.5	2.6	3.6	3.4	3.4	4.1	2.6	5.4	8.6	
Copper	µg/g	1	6	8	8	7	8	7	11	18	
Lead	µg/g	1	2	3	2	2	3	2	5	7	
Molybdenum	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	1	5	7	5	5	7	6	11	17	
Selenium	µg/g	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	µg/g	1	15	21	18	19	21	10	26	34	
Zinc	µg/g	5	14	20	17	18	22	14	33	49	
Chromium VI	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide	µg/g	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity	mS/cm	0.005	0.115	0.086	0.087	0.088	0.088	0.106	0.167	0.153	
Sodium Adsorption Ratio	NA	NA	0.116	0.065	0.055	0.076	0.075	0.256	0.076	0.246	
pH, 2:1 CaCl2 Extraction	pH Units	NA	7.60	7.59	7.77	7.79	7.80	7.94	7.75	7.61	

Certified By:

Elizabeth Potokowska



Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2016-10-18

DATE REPORTED: 2016-10-25

		SAMPLE DESCRIPTION:		16-6-1	16-13-1	16-10-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016
Parameter	Unit	G / S	RDL	7940270	7940292	7940400
Antimony	µg/g		0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	<1	<1	<1
Barium	µg/g		2	49	10	49
Beryllium	µg/g		0.5	<0.5	<0.5	<0.5
Boron	µg/g		5	<5	<5	<5
Boron (Hot Water Soluble)	µg/g		0.10	<0.10	<0.10	<0.10
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5
Chromium	µg/g		2	10	4	11
Cobalt	µg/g		0.5	3.4	1.6	3.8
Copper	µg/g		1	7	4	8
Lead	µg/g		1	2	1	3
Molybdenum	µg/g		0.5	<0.5	<0.5	<0.5
Nickel	µg/g		1	5	2	6
Selenium	µg/g		0.4	<0.4	<0.4	<0.4
Silver	µg/g		0.2	<0.2	<0.2	<0.2
Thallium	µg/g		0.4	<0.4	<0.4	<0.4
Uranium	µg/g		0.5	<0.5	<0.5	<0.5
Vanadium	µg/g		1	20	10	19
Zinc	µg/g		5	18	8	19
Chromium VI	µg/g		0.2	<0.2	<0.2	<0.2
Cyanide	µg/g		0.040	<0.040	<0.040	<0.040
Mercury	µg/g		0.10	<0.10	<0.10	<0.10
Electrical Conductivity	mS/cm		0.005	0.089	0.063	0.104
Sodium Adsorption Ratio	NA		NA	0.073	0.109	0.102
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.85	8.02	7.46

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7940086-7940400 EC & SAR were determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio.

Certified By:

Elizabeth Potokowska



Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - PAHs (Soil)											
DATE RECEIVED: 2016-10-18						DATE REPORTED: 2016-10-25					
		SAMPLE DESCRIPTION:		BH16-15-1	DUP 1	16-17-1	16-28-1	16-25-1	16-34-1	16-22-1	16-5-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016
Parameter	Unit	G / S	RDL	7940086	7940113	7940138	7940166	7940174	7940182	7940205	7940260
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits									
Chrysene-d12	%	50-140		84	71	78	84	82	82	85	92

Certified By:

N Popmukolof



Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

5835 COOPERS AVENUE
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CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - PAHs (Soil)						
DATE RECEIVED: 2016-10-18			DATE REPORTED: 2016-10-25			
SAMPLE DESCRIPTION:		16-6-1	16-13-1	16-10-1		
SAMPLE TYPE:		Soil	Soil	Soil		
DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016		
Parameter	Unit	G / S	RDL	7940270	7940292	7940400
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits				
Chrysene-d12	%	50-140	89	83	79	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7940086-7940400 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

Certified By:

N Popmukolof



Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

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CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2016-10-18

DATE REPORTED: 2016-10-25

		SAMPLE DESCRIPTION:		BH16-15-1	DUP 1	16-17-1	16-28-1	16-25-1	16-34-1	16-22-1	16-5-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016
Parameter	Unit	G / S	RDL	7940086	7940113	7940138	7940166	7940174	7940182	7940205	7940260
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	7.8	6.4	4.6	7.4	9.2	4.0	17.6	15.8
Surrogate	Unit	Acceptable Limits									
Terphenyl	%	60-140		86	101	118	96	79	102	77	102
		SAMPLE DESCRIPTION:		16-6-1	16-13-1	16-10-1					
		SAMPLE TYPE:		Soil	Soil	Soil					
		DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016					
Parameter	Unit	G / S	RDL	7940270	7940292	7940400					
F1 (C6 to C10)	µg/g		5	<5	<5	<5					
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5	<5					
F2 (C10 to C16)	µg/g		10	<10	<10	<10					
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10					
F3 (C16 to C34)	µg/g		50	<50	<50	<50					
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50					
F4 (C34 to C50)	µg/g		50	<50	<50	<50					
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA					
Moisture Content	%		0.1	8.0	2.3	15.8					
Surrogate	Unit	Acceptable Limits									
Terphenyl	%	60-140		89	74	110					

Certified By:

N Popmukolof



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

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ATTENTION TO: Nick LaPosta

SAMPLING SITE:

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2016-10-18

DATE REPORTED: 2016-10-25

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7940086-7940400 Results are based on sample dry weight.

The C6-C10 fraction is calculated using toluene response factor.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX and PAH contributions.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

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AGAT WORK ORDER: 16T150001

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CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - VOCs (Soil)											
DATE RECEIVED: 2016-10-18						DATE REPORTED: 2016-10-25					
SAMPLE DESCRIPTION:		BH16-15-1		DUP 1		16-17-1		16-28-1		16-25-1	
SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil	
DATE SAMPLED:		10/17/2016		10/17/2016		10/17/2016		10/17/2016		10/17/2016	
Parameter	Unit	G / S	RDL	7940086	7940113	7940138	7940166	7940174	7940182	7940205	7940260
Dichlorodifluoromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

5835 COOPERS AVENUE
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SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - VOCs (Soil)											
DATE RECEIVED: 2016-10-18						DATE REPORTED: 2016-10-25					
		SAMPLE DESCRIPTION:		BH16-15-1	DUP 1	16-17-1	16-28-1	16-25-1	16-34-1	16-22-1	16-5-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016	10/17/2016
Parameter	Unit	G / S	RDL	7940086	7940113	7940138	7940166	7940174	7940182	7940205	7940260
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene	µg/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		96	112	101	102	112	130	98	113
4-Bromofluorobenzene	% Recovery	50-140		88	82	83	82	85	77	81	82

Certified By:

N Popmukolof



Certificate of Analysis

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SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - VOCs (Soil)						
DATE RECEIVED: 2016-10-18			DATE REPORTED: 2016-10-25			
SAMPLE DESCRIPTION:		16-6-1	16-13-1	16-10-1		
SAMPLE TYPE:		Soil	Soil	Soil		
DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016		
Parameter	Unit	G / S	RDL	7940270	7940292	7940400
Dichlorodifluoromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05

Certified By:

N Popmukolof



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Nick LaPosta

SAMPLED BY: Derek Franceschini

O. Reg. 153(511) - VOCs (Soil)						
DATE RECEIVED: 2016-10-18				DATE REPORTED: 2016-10-25		
		SAMPLE DESCRIPTION:		16-6-1	16-13-1	16-10-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		10/17/2016	10/17/2016	10/17/2016
Parameter	Unit	G / S	RDL	7940270	7940292	7940400
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
Xylene Mixture	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene	µg/g		0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		110	105	130
4-Bromofluorobenzene	% Recovery	50-140		82	81	78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7940086-7940400 The sample was analysed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Certified By:

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

PROJECT: 1661309

SAMPLING SITE:

AGAT WORK ORDER: 16T150001

ATTENTION TO: Nick LaPosta

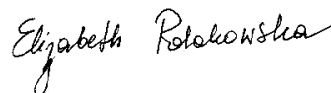
SAMPLED BY: Derek Franceschini

Soil Analysis															
RPT Date: Oct 25, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	7940086	7940086	<0.8	<0.8	NA	< 0.8	97%	70%	130%	99%	80%	120%	95%	70%	130%
Arsenic	7940086	7940086	<1	<1	NA	< 1	112%	70%	130%	104%	80%	120%	100%	70%	130%
Barium	7940086	7940086	29	34	15.9%	< 2	99%	70%	130%	99%	80%	120%	92%	70%	130%
Beryllium	7940086	7940086	<0.5	<0.5	NA	< 0.5	96%	70%	130%	104%	80%	120%	99%	70%	130%
Boron	7940086	7940086	<5	<5	NA	< 5	72%	70%	130%	102%	80%	120%	101%	70%	130%
Boron (Hot Water Soluble)	7940205	7940205	<0.10	<0.10	NA	< 0.10	94%	60%	140%	94%	70%	130%	91%	60%	140%
Cadmium	7940086	7940086	<0.5	<0.5	NA	< 0.5	101%	70%	130%	104%	80%	120%	101%	70%	130%
Chromium	7940086	7940086	8	10	NA	< 2	90%	70%	130%	104%	80%	120%	100%	70%	130%
Cobalt	7940086	7940086	2.6	2.9	10.9%	< 0.5	91%	70%	130%	99%	80%	120%	95%	70%	130%
Copper	7940086	7940086	6	7	15.4%	< 1	94%	70%	130%	105%	80%	120%	100%	70%	130%
Lead	7940086	7940086	2	3	NA	< 1	105%	70%	130%	105%	80%	120%	98%	70%	130%
Molybdenum	7940086	7940086	<0.5	<0.5	NA	< 0.5	104%	70%	130%	107%	80%	120%	102%	70%	130%
Nickel	7940086	7940086	5	6	18.2%	< 1	93%	70%	130%	99%	80%	120%	94%	70%	130%
Selenium	7940086	7940086	<0.4	<0.4	NA	< 0.4	115%	70%	130%	100%	80%	120%	95%	70%	130%
Silver	7940086	7940086	<0.2	<0.2	NA	< 0.2	101%	70%	130%	109%	80%	120%	104%	70%	130%
Thallium	7940086	7940086	<0.4	<0.4	NA	< 0.4	95%	70%	130%	100%	80%	120%	96%	70%	130%
Uranium	7940086	7940086	<0.5	<0.5	NA	< 0.5	99%	70%	130%	94%	80%	120%	91%	70%	130%
Vanadium	7940086	7940086	15	17	12.5%	< 1	89%	70%	130%	97%	80%	120%	95%	70%	130%
Zinc	7940086	7940086	14	17	NA	< 5	100%	70%	130%	107%	80%	120%	101%	70%	130%
Chromium VI	7931931		<0.2	<0.2	NA	< 0.2	94%	70%	130%	102%	80%	120%	105%	70%	130%
Cyanide	7933323		<0.040	<0.040	NA	< 0.040	96%	70%	130%	95%	80%	120%	99%	70%	130%
Mercury	7940086	7940086	<0.10	<0.10	NA	< 0.10	116%	70%	130%	100%	80%	120%	95%	70%	130%
Electrical Conductivity	7940205	7940205	0.167	0.167	0.0%	< 0.005	100%	90%	110%	NA			NA		
Sodium Adsorption Ratio	7940205	7940205	0.076	0.075	1.3%	NA	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	7940086	7940086	7.60	7.57	0.4%	NA	100%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.

Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By:



Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

ATTENTION TO: Nick LaPosta

SAMPLING SITE:

SAMPLED BY: Derek Franceschini

Trace Organics Analysis

RPT Date: Oct 25, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE				
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - VOCs (Soil)

Dichlorodifluoromethane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	109%	50%	140%	104%	50%	140%
Vinyl Chloride	7940400	7940400	< 0.02	< 0.02	NA	< 0.02	109%	50%	140%	113%	50%	140%	106%	50%	140%
Bromomethane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	104%	50%	140%	100%	50%	140%
Trichlorofluoromethane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	104%	50%	140%	113%	50%	140%
Acetone	7940400	7940400	< 0.50	< 0.50	NA	< 0.50	102%	50%	140%	92%	50%	140%	100%	50%	140%
1,1-Dichloroethylene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	81%	60%	130%	93%	50%	140%
Methylene Chloride	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	60%	130%	94%	50%	140%
Trans- 1,2-Dichloroethylene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	117%	60%	130%	83%	50%	140%
Methyl tert-butyl Ether	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	82%	60%	130%	102%	50%	140%
1,1-Dichloroethane	7940400	7940400	< 0.02	< 0.02	NA	< 0.02	94%	50%	140%	102%	60%	130%	92%	50%	140%
Methyl Ethyl Ketone	7940400	7940400	< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	94%	50%	140%	109%	50%	140%
Cis- 1,2-Dichloroethylene	7940400	7940400	< 0.02	< 0.02	NA	< 0.02	80%	50%	140%	114%	60%	130%	92%	50%	140%
Chloroform	7940400	7940400	< 0.04	< 0.04	NA	< 0.04	92%	50%	140%	82%	60%	130%	100%	50%	140%
1,2-Dichloroethane	7940400	7940400	< 0.03	< 0.03	NA	< 0.03	102%	50%	140%	98%	60%	130%	114%	50%	140%
1,1,1-Trichloroethane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	104%	50%	140%	89%	60%	130%	103%	50%	140%
Carbon Tetrachloride	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	81%	60%	130%	102%	50%	140%
Benzene	7940400	7940400	< 0.02	< 0.02	NA	< 0.02	116%	50%	140%	104%	60%	130%	115%	50%	140%
1,2-Dichloropropane	7940400	7940400	< 0.03	< 0.03	NA	< 0.03	115%	50%	140%	111%	60%	130%	112%	50%	140%
Trichloroethylene	7940400	7940400	< 0.03	< 0.03	NA	< 0.03	101%	50%	140%	89%	60%	130%	113%	50%	140%
Bromodichloromethane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	105%	60%	130%	108%	50%	140%
Methyl Isobutyl Ketone	7940400	7940400	< 0.50	< 0.50	NA	< 0.50	95%	50%	140%	108%	50%	140%	98%	50%	140%
1,1,2-Trichloroethane	7940400	7940400	< 0.04	< 0.04	NA	< 0.04	111%	50%	140%	114%	60%	130%	116%	50%	140%
Toluene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	116%	50%	140%	122%	60%	130%	108%	50%	140%
Dibromochloromethane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	110%	60%	130%	101%	50%	140%
Ethylene Dibromide	7940400	7940400	< 0.04	< 0.04	NA	< 0.04	113%	50%	140%	114%	60%	130%	103%	50%	140%
Tetrachloroethylene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	114%	50%	140%	111%	60%	130%	100%	50%	140%
1,1,1,2-Tetrachloroethane	7940400	7940400	< 0.04	< 0.04	NA	< 0.04	99%	50%	140%	104%	60%	130%	105%	50%	140%
Chlorobenzene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	114%	50%	140%	111%	60%	130%	116%	50%	140%
Ethylbenzene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	96%	60%	130%	105%	50%	140%
m & p-Xylene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	112%	50%	140%	116%	60%	130%	118%	50%	140%
Bromoform	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	115%	60%	130%	101%	50%	140%
Styrene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	110%	60%	130%	114%	50%	140%
1,1,2,2-Tetrachloroethane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	111%	60%	130%	100%	50%	140%
o-Xylene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	104%	50%	140%	97%	60%	130%	103%	50%	140%
1,3-Dichlorobenzene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	115%	60%	130%	102%	50%	140%
1,4-Dichlorobenzene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	116%	50%	140%	106%	60%	130%	106%	50%	140%
1,2-Dichlorobenzene	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	103%	60%	130%	105%	50%	140%
1,3-Dichloropropene	7940400	7940400	< 0.04	< 0.04	NA	< 0.04	109%	50%	140%	112%	60%	130%	106%	50%	140%
n-Hexane	7940400	7940400	< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	107%	60%	130%	103%	50%	140%

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

ATTENTION TO: Nick LaPosta

SAMPLING SITE:

SAMPLED BY: Derek Franceschini

Trace Organics Analysis (Continued)

RPT Date: Oct 25, 2016			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

F1 (C6 to C10)	7940400	7940400	< 5	< 5	NA	< 5	74%	60%	130%	106%	85%	115%	90%	70%	130%
F2 (C10 to C16)	7922238		< 10	< 10	NA	< 10	101%	60%	130%	104%	80%	120%	72%	70%	130%
F3 (C16 to C34)	7922238		< 50	< 50	NA	< 50	98%	60%	130%	106%	80%	120%	97%	70%	130%
F4 (C34 to C50)	7922238		< 50	< 50	NA	< 50	95%	60%	130%	92%	80%	120%	101%	70%	130%

O. Reg. 153(511) - PAHs (Soil)

Naphthalene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	104%	50%	140%	84%	50%	140%	88%	50%	140%
Acenaphthylene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	85%	50%	140%	88%	50%	140%
Acenaphthene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	88%	50%	140%	91%	50%	140%
Fluorene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	87%	50%	140%	86%	50%	140%
Phenanthrene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	95%	50%	140%	85%	50%	140%
Anthracene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	109%	50%	140%	60%	50%	140%	53%	50%	140%
Fluoranthene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	88%	50%	140%	83%	50%	140%
Pyrene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	107%	50%	140%	83%	50%	140%	82%	50%	140%
Benz(a)anthracene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	82%	50%	140%	84%	50%	140%
Chrysene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	107%	50%	140%	86%	50%	140%	87%	50%	140%
Benzo(b)fluoranthene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	131%	50%	140%	70%	50%	140%	72%	50%	140%
Benzo(k)fluoranthene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	123%	50%	140%	86%	50%	140%	94%	50%	140%
Benzo(a)pyrene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	128%	50%	140%	89%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	120%	50%	140%	73%	50%	140%	80%	50%	140%
Dibenz(a,h)anthracene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	73%	50%	140%	79%	50%	140%
Benzo(g,h,i)perylene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	62%	50%	140%	64%	50%	140%
2-and 1-methyl Naphthalene	7940138	7940138	< 0.05	< 0.05	NA	< 0.05	129%	50%	140%	76%	50%	140%	78%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA) performed with this batch.

Certified By:



Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

ATTENTION TO: Nick LaPosta

SAMPLING SITE:

SAMPLED BY: Derek Franceschini

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	EPA SW 846 6010C; MSA, Part 3, Ch.21	ICP/OES
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Uranium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium VI	INOR-93-6029	SM 3500 B; MSA Part 3, Ch. 25	SPECTROPHOTOMETER
Cyanide	INOR-93-6052	MOE CN-3015 & E 3009 A; SM 4500 CN	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Electrical Conductivity	INOR-93-6036	McKeague 4.12, SM 2510 B	EC METER
Sodium Adsorption Ratio	INOR-93-6007	McKeague 4.12 & 3.26 & EPA SW-846 6010B	ICP/OES
pH, 2:1 CaCl ₂ Extraction	INOR-93-6031	MSA part 3 & SM 4500-H+ B	PH METER

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

ATTENTION TO: Nick LaPosta

SAMPLING SITE:

SAMPLED BY: Derek Franceschini

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluorene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Phenanthrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Chrysene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Chrysene-d12	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	GC / FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	GC / FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method	GC / FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	CCME Tier 1 Method	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method	GC / FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	CCME Tier 1 Method	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	GRAVIMETRIC ANALYSIS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID
Dichlorodifluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Acetone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Benzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 16T150001

PROJECT: 1661309

ATTENTION TO: Nick LaPosta

SAMPLING SITE:

SAMPLED BY: Derek Franceschini

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,2-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Styrene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Xylene Mixture	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS



AGAT

Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Report Information:

Company: Golder Associates Ltd.
Contact: Nick La Posta
Address: 121 Commerce Park Dr. Unit 6
Barrie, ON L4N 8X1
705-722-4492 Fax: 705-722-3786
Phone: 705-722-3786
Reports to be sent to:
1. Email: nick-la posta@golder.com
2. Email: dfranceschini@golder.com

Project Information:

Project: 1661309
Site Location: Big Bay Point & Mapleview, Barrie
Sampled By: DF
AGAT Quote #: _____ PO: _____

Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: _____
Contact: Nick La Posta
Address: _____
Email: nick-la posta@golder.com

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☐ Regulation 153/04

☐ Sewer Use

☐ Regulation 558

Table _____

Indicate One

☐ Ind/Com

☐ Sanitary

☐ CCME

☒ Res/Park

☐ Storm

☐ Prov. Water Quality Objectives (PWQO)

☐ Agriculture

☐ Other

Soil Texture (Check One)

Region _____

Indicate One

☒ Coarse

☐ Fine

Indicate One

Is this submission for a
Record of Site Condition?

☐ Yes

☒ No

Report Guideline on
Certificate of Analysis

☐ Yes

☒ No

Sample Matrix

Legend

B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Field Filtered - Metals, Hg, CrVI
(Please Circle)

(Check Applicable)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	ORPs: ☐ B-HWS ☐ C ☐ CN ☐ C ⁶⁺ ☐ EC ☐ FOC ☐ NO ₃ /NO ₂ ☐ Total N ☐ Hg ☐ pH ☐ SAR	Nutrients: ☐ TP ☐ NH ₃ ☐ TKN ☐ NO ₃ ☐ NO ₂ ☐ NO ₃ /NO ₂	Volatiles: ☒ VOC ☐ BTEX ☐ THM	CCME Fractions 1 to 4	ABNS	PAHS	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use
BH 16-15-1	17-Oct-16	10:40	4	S	-limited sample		X						X	X	X	X	X				
DUP		10:40	4	S	-limited sample		X						X	X	X	X	X				
16-17-1		10:55	4	S			X						X	X	X	X	X				
16-28-1		11:20	4	S			X						X	X	X	X	X				
16-25-1		11:30	4	S			X						X	X	X	X	X				
16-34-1		11:55	4	S			X						X	X	X	X	X				
16-22-1		12:15	4	S			X						X	X	X	X	X				
16-5-1		12:40	4	S			X						X	X	X	X	X				
16-6-1		12:55	4	S			X						X	X	X	X	X				
16-13-1		13:15	4	S			X						X	X	X	X	X				
16-10-1		13:35	4	S			X						X	X	X	X	X				

Samples Relinquished By (Print Name and Sign):

Derek Franceschini

Samples Relinquished By (Print Name and Sign):

Nick La Posta

Samples Relinquished By (Print Name and Sign):

Date

16-Oct-16

Date

2016/10/18

Date

Time

15:20

Time

4:12

Time

Samples Received By (Print Name and Sign):

Rick La Posta

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date

2016/10/18

Date

Date

Time

4:50

Time

Time

Page 1 of 1

Nº: **T 031526**

As a global, employee-owned organisation with over 50 years of experience, Golder Associates is driven by our purpose to engineer earth's development while preserving earth's integrity. We deliver solutions that help our clients achieve their sustainable development goals by providing a wide range of independent consulting, design and construction services in our specialist areas of earth, environment and energy.

For more information, visit golder.com

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BURNSIDE

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Appendix B

Pre-Development Catchment Parameters

Project Name: LMB BlueSky
Project No: 300039296
Location: Barrie, ON
Designed: MLZ
Checked: PCC
Date: 16/11/14



Existing Conditions Catchments

Determination of Soils Parameters - Existing Catchments												
Watershed	Catchment	Total Area (ha)	Imp Area (ha)	Perv Area (ha)	Soil for Green and Ampt Parameters	Pervious Area per Soil (ha)	Suction Head (mm)	Suction Head (mm) - Composite	Conductivity	Conductivity - Composite	Initial Deficit (frac.)	Initial Deficit (frac.) - Composite
Hewitt's Creek												
	119	13.87	0.24	13.63	Sand	7.67	52.96	55.73	178	137.4	0.361	0.351
					Clay-Loam	5.95	59.289		85		0.338	
	120	18.43	0.00	18.43	Sand	7.55	52.96	56.70	178	123.1	0.361	0.347
					Clay-Loam	10.88	59.289		85		0.338	
	121	6.82	0.00	6.82	Sand	4.30	52.96	55.30	178	143.6	0.361	0.353
					Clay-Loam	2.52	59.289		85		0.338	
	122	2.21	0.00	2.21	Sand	1.71	52.96	54.39	178	157.0	0.361	0.356
					Clay-Loam	0.50	59.289		85		0.338	
	123	0.59	0.00	0.59	Clay-Loam	0.59	59.289	59.289	85	85.0	0.338	0.338
	124	1.80	0.00	1.80	Sand	0.46	52.96	57.67	178	108.7	0.361	0.344
					Clay-Loam	1.34	59.289		85		0.338	
	125	1.04	0.00	1.04	Sand	0.21	52.96	58.01	178	103.8	0.361	0.343
					Clay-Loam	0.83	59.289		85		0.338	
	126	1.87	0.00	1.87	Sand	0.80	52.96	56.58	178	124.8	0.361	0.348
					Clay-Loam	1.07	59.289		85		0.338	
	127	6.54	0.46	6.08	Sand	3.09	52.96	56.07	178	132.3	0.361	0.350
					Clay-Loam	2.99	59.289		85		0.338	
	Total	53.17										

Project Name: LMB BlueSky
Project No: 300039296
Location: Barrie, ON
Designed: MLZ
Checked: PCC
Date: 16/11/14



Existing Conditions Catchments

Determination of Soils Parameters - Existing Catchments												
Watershed	Catchment	Total Area (ha)	Imp Area (ha)	Perv Area (ha)	Soil for Green and Ampt Parameters	Pervious Area per Soil (ha)	Suction Head (mm)	Suction Head (mm) - Composite	Conductivity	Conductivity - Composite	Initial Deficit (frac.)	Initial Deficit (frac.) - Composite
Sandy Cove Creek												
	130	39.88	0.24	39.64	Sand	26.89	52.96	55.00	178	148.1	0.361	0.354
					Clay-Loam	12.75	59.289		85		0.338	
	131	4.28	0.05	4.23	Clay-Loam	4.23	59.289	59.289	85	85.0	0.338	0.338
	132	3.80	0.04	3.76	Sand	1.18	52.96	56.67	178	114.5	0.361	0.342
					Clay-Loam	2.54	59.289		85		0.338	
	EXT	3.32	0.00	3.32	Sand	1.33	52.96	56.75	178	122.3	0.361	0.347
					Clay-Loam	1.99	59.289		85		0.338	
	Total	47.96										

Existing Catchment			Pre Development Land use (ha)								
Watershed	Catchment	Total Area (ha)	Hay/Pasture	Crop Land	Low Intensity Development	High Intensity Development Commercial	High Intensity Development Residential	Transitional	Forest	Wetland	Total Area (ha) Check
Hewitt's Creek											
	119	13.66		5.00	1.44			5.21	2.01		13.66
	120	18.42	2.97	12.66	0.00				2.79		18.42
	121	6.82	5.86						0.96		6.82
	122	2.21	2.21								2.21
	123	0.59	0.59								0.59
	124	1.80	1.80								1.80
	125	1.04	1.04								1.04
	126	1.87	1.87								1.87
	127	6.40	6.23		0.17						6.40
		52.81	22.57	17.66	1.61	0.00	0.00	5.21	5.76	0.00	52.81

Existing Catchment			Pre Development Land use (ha)								
Watershed	Catchment	Total Area (ha)	Hay/Pasture	Crop Land	Low Intensity Development	High Intensity Development Commercial	High Intensity Development Residential	Transitional	Forest	Wetland	Total Area (ha) Check
Sandy Cove Creek											
	130	39.69	16.68	21.89	0.70			0.04	0.38		39.69
	131	4.18		2.42	0.51			0.38	0.87		4.18
	132	3.80		0.66	0.37			1.66	1.11		3.80
		47.67	16.68	24.97	1.58	0.00	0.00	2.08	2.36	0.00	47.67



BURNSIDE

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Appendix C

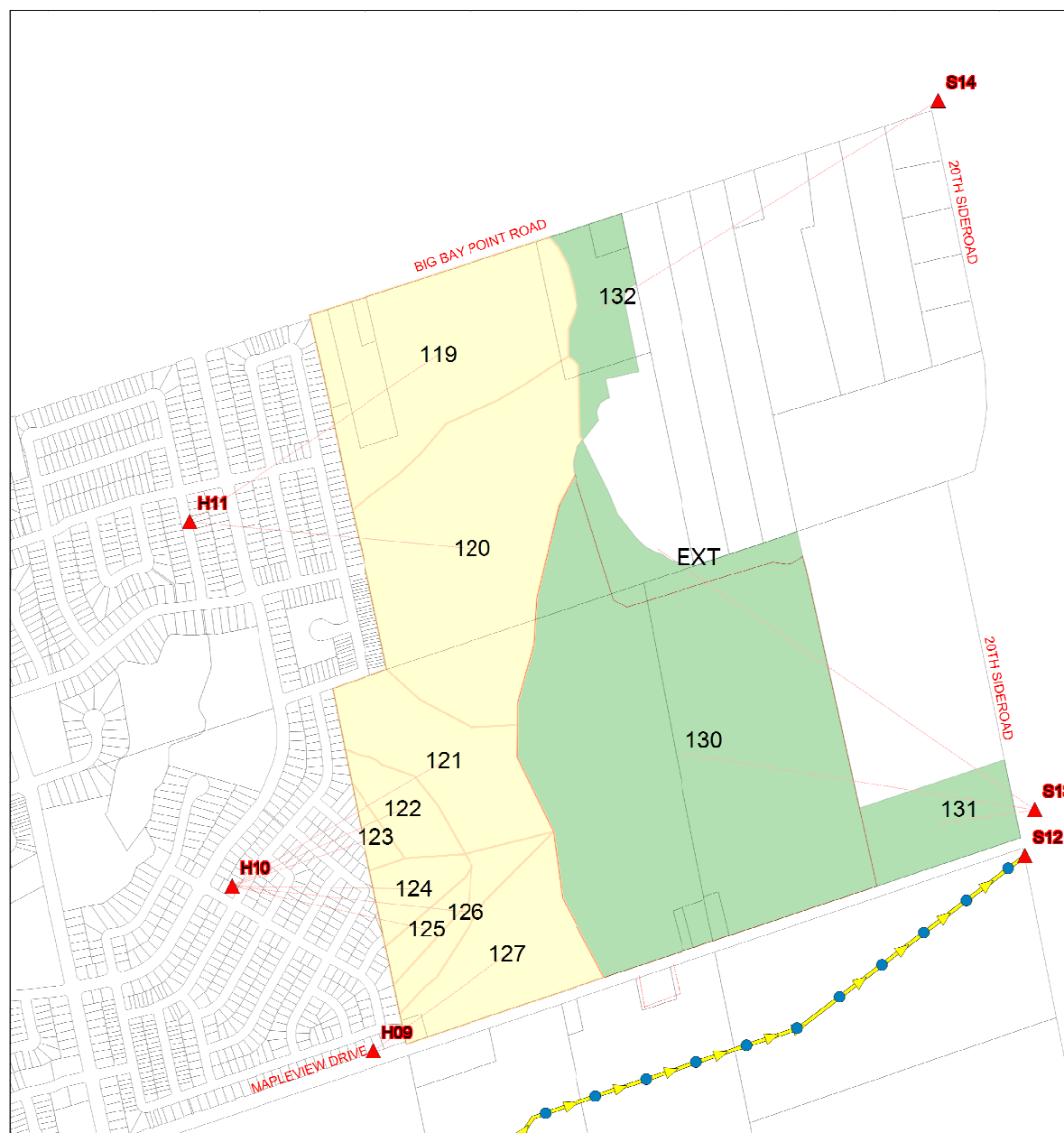
Pre-Development PCSWMM Model

Legend

- Junctions
- ▲ Outfalls
- Conduits
- Subcatchments
 - Visible
 - Lover
 - SandyCove
- 161117_Pre-Dev 130
- 140908_Exst Background



450 m



Existing Conditions PCSWMM Model - 100Yr 24hr SCS Design Storm

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.011)

PROJECT TITLE: LM Barrie BlueSky
PROJECT NO: 300039296
MODEL CREATED BY: R.J.BURNSIDE AND ASSOCIATES LTD

Element Count

Number of rain gages 22
Number of subcatchments ... 13
Number of nodes 24
Number of links 18
Number of pollutants 0
Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
100yr_Chicago_4hr	100yr_Chicago_4hr	INTENSITY	5 min.
100yr_SCS_24h_Type_II_133.6mm	100yr_SCS_24h_Type_II_133.6mm	INTENSITY	15 min.
100yr_SCS_6h_106.5mm	100yr_SCS_6h_106.5mm	INTENSITY	5 min.
10yr_Chicago_4hr	10yr_Chicago_4hr	INTENSITY	5 min.
10yr_SCS_24h_Type_II_89.9mm	10yr_SCS_24h_Type_II_89.9mm	INTENSITY	15 min.
10yr_SCS_6h_70.8mm	10yr_SCS_6h_70.8mm	INTENSITY	5 min.
25mm_SCS_24h_Type_II_25mm	25mm_SCS_24h_Type_II_25mm	INTENSITY	15 min.
25mm_SCS_6h_25mm	25mm_SCS_6h_25mm	INTENSITY	5 min.
25yr_Chicago_4hr	25yr_Chicago_4hr	INTENSITY	5 min.
25yr_SCS_24h_Type_II_107.5mm	25yr_SCS_24h_Type_II_107.5mm	INTENSITY	15 min.
25yr_SCS_6h_85.2mm	25yr_SCS_6h_85.2mm	INTENSITY	5 min.
2yr_Chicago_4hr	2yr_Chicago_4hr	INTENSITY	5 min.
2yr_SCS_24h_Type_II_55mm	2yr_SCS_24h_Type_II_55mm	INTENSITY	15 min.
2yr_SCS_6h_42.3mm	2yr_SCS_6h_42.3mm	INTENSITY	5 min.
50yr_Chicago_4hr	50yr_Chicago_4hr	INTENSITY	5 min.
50yr_SCS_24h_Type_II_120.6mm	50yr_SCS_24h_Type_II_120.6mm	INTENSITY	15 min.
50yr_SCS_6h_95.9mm	50yr_SCS_6h_95.9mm	INTENSITY	5 min.
5yr_Chicago_4hr	5yr_Chicago_4hr	INTENSITY	5 min.
5yr_SCS_24h_Type_II_76mm	5yr_SCS_24h_Type_II_76mm	INTENSITY	15 min.
5yr_SCS_6h_59.5mm	5yr_SCS_6h_59.5mm	INTENSITY	5 min.

Hurricane_Hazel_(Southern_Ontario) Hurricane_Hazel_(Southern_Ontario) INTENSITY 60 min.
SCS_6h_1mm_Jordan SCS_6h_1mm_Jordan INTENSITY 5 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
119	13.87	283.15	1.73	1.4000	100yr_SCS_24h_Type_II_133.6mm	H11
120	18.44	409.87	0.00	1.5000	100yr_SCS_24h_Type_II_133.6mm	H11
121	6.82	148.31	0.00	1.2000	100yr_SCS_24h_Type_II_133.6mm	H10
122	2.22	92.30	0.00	2.0000	100yr_SCS_24h_Type_II_133.6mm	H10
123	0.59	51.52	0.00	1.2000	100yr_SCS_24h_Type_II_133.6mm	H10
124	1.80	94.92	0.00	2.0000	100yr_SCS_24h_Type_II_133.6mm	H10
125	1.04	51.97	0.00	2.4000	100yr_SCS_24h_Type_II_133.6mm	H10
126	1.87	54.94	0.00	1.6000	100yr_SCS_24h_Type_II_133.6mm	H10
127	6.54	172.21	7.03	2.1000	100yr_SCS_24h_Type_II_133.6mm	H09
130	39.90	688.01	0.60	0.8000	100yr_SCS_24h_Type_II_133.6mm	S13
131	4.29	150.35	1.17	3.2000	100yr_SCS_24h_Type_II_133.6mm	S13
132	3.81	345.94	1.05	1.6000	100yr_SCS_24h_Type_II_133.6mm	S14
EXT	3.31	300.87	0.00	3.0000	100yr_SCS_24h_Type_II_133.6mm	S13

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J36	JUNCTION	255.19	1.37	0.0	
J40	JUNCTION	254.00	1.37	0.0	
J41	JUNCTION	253.18	1.98	0.0	
J42	JUNCTION	252.00	1.98	0.0	
J43	JUNCTION	251.75	1.91	0.0	
J44	JUNCTION	251.50	1.46	0.0	
J45	JUNCTION	251.10	2.21	0.0	
J46	JUNCTION	250.71	2.26	0.0	
J47	JUNCTION	250.31	2.67	0.0	
J48	JUNCTION	250.18	2.67	0.0	
J49	JUNCTION	250.18	2.45	0.0	
J50	JUNCTION	250.17	2.20	0.0	
J51	JUNCTION	250.17	1.81	0.0	
J52	JUNCTION	250.17	2.89	0.0	
J53	JUNCTION	250.16	2.99	0.0	
J54	JUNCTION	249.33	3.38	0.0	

J55	JUNCTION	248.65	3.70	0.0
J56	JUNCTION	246.12	3.70	0.0
H09	OUTFALL	0.00	0.00	0.0
H10	OUTFALL	257.66	0.00	0.0
H11	OUTFALL	0.00	0.00	0.0
S12	OUTFALL	246.00	2.85	0.0
S13	OUTFALL	0.00	0.00	0.0
S14	OUTFALL	251.00	0.00	0.0

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C2_16	J36	J40	CONDUIT	100.0	1.1951	0.0500
C2_17	J40	J41	CONDUIT	100.0	0.8200	0.0500
C2_18	J41	J42	CONDUIT	100.0	1.1801	0.0500
C2_19	J42	J43	CONDUIT	100.0	0.2500	0.0500
C2_20	J43	J44	CONDUIT	100.0	0.2500	0.0500
C2_21	J44	J45	CONDUIT	100.0	0.4000	0.0500
C2_22	J45	J46	CONDUIT	100.0	0.3900	0.0500
C2_23	J46	J47	CONDUIT	100.0	0.3980	0.0500
C2_24	J47	J48	CONDUIT	100.0	0.1290	0.0500
C2_25	J48	J49	CONDUIT	100.0	0.0060	0.0500
C2_26	J49	J50	CONDUIT	100.0	0.0030	0.0500
C2_27	J50	J51	CONDUIT	100.0	0.0030	0.0500
C2_28	J51	J52	CONDUIT	100.0	0.0030	0.0500
C2_29	J52	J53	CONDUIT	100.0	0.0030	0.0500
C2_30	J53	J54	CONDUIT	100.0	0.8310	0.0500
C2_31	J54	J55	CONDUIT	100.0	0.6840	0.0500
C2_32	J55	J56	CONDUIT	100.0	2.5308	0.0500
C2_33	J56	S12	CONDUIT	39.0	0.3075	0.0500

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C2_16	2_16	1.37	101.74	1.03	98.00	1	227.44
C2_17	2_17	0.97	61.85	0.63	98.00	1	82.19
C2_18	2_18	1.98	95.65	0.96	99.00	1	202.37
C2_19	2_19	1.91	80.50	0.81	99.00	1	69.88
C2_20	2_20	1.31	46.13	0.46	98.70	1	27.69

C2_21	2_21	1.46	50.65	0.51	98.00	1	41.10
C2_22	2_22	2.21	136.50	1.38	98.40	1	211.41
C2_23	2_23	2.26	136.62	1.37	99.00	1	212.96
C2_24	2_24	2.67	123.98	1.24	99.00	1	102.96
C2_25	2_25	2.45	105.73	1.06	99.00	1	17.03
C2_26	2_26	2.20	78.67	0.79	99.00	1	7.35
C2_27	2_28	1.81	60.41	0.61	98.00	1	4.78
C2_28	2_28	1.81	60.41	0.61	98.00	1	4.78
C2_29	2_29	2.89	128.35	1.30	98.00	1	16.76
C2_30	2_30	2.99	116.36	1.18	98.00	1	236.87
C2_31	2_31	3.38	137.44	1.39	98.00	1	282.67
C2_32	2_32	3.70	163.81	1.68	98.00	1	735.38
C2_33	2_33	2.85	104.64	1.18	99.00	1	129.77

Transect Summary

Transect 1_1

Area:	0.0006	0.0017	0.0032	0.0050	0.0071
	0.0093	0.0119	0.0146	0.0176	0.0209
	0.0244	0.0282	0.0322	0.0365	0.0410
	0.0457	0.0507	0.0558	0.0613	0.0669
	0.0727	0.0788	0.0852	0.0917	0.0985
	0.1056	0.1129	0.1204	0.1282	0.1363
	0.1446	0.1531	0.1620	0.1710	0.1804
	0.1900	0.2026	0.2230	0.2636	0.3155
	0.3720	0.4321	0.4947	0.5600	0.6278
	0.6984	0.7713	0.8462	0.9227	1.0000
Hrad:	0.0438	0.0940	0.1380	0.1838	0.2310
	0.2758	0.3189	0.3608	0.3996	0.4378
	0.4755	0.5130	0.5521	0.5915	0.6305
	0.6691	0.7079	0.7469	0.7856	0.8240
	0.8620	0.8986	0.9351	0.9715	1.0078
	1.0415	1.0753	1.1092	1.1432	1.1776
	1.2111	1.2447	1.2786	1.3130	1.3475
	1.3816	1.3846	1.3248	1.1644	0.4760
	0.5278	0.5801	0.6326	0.6849	0.7357
	0.7850	0.8359	0.8874	0.9431	1.0000
Width:	0.0123	0.0168	0.0212	0.0249	0.0279
	0.0310	0.0340	0.0371	0.0403	0.0436

0.0469	0.0502	0.0532	0.0562	0.0592
0.0622	0.0652	0.0681	0.0710	0.0739
0.0768	0.0798	0.0828	0.0859	0.0889
0.0922	0.0954	0.0987	0.1019	0.1052
0.1085	0.1118	0.1151	0.1184	0.1217
0.1277	0.1977	0.3933	0.6218	0.7018
0.7519	0.7894	0.8226	0.8544	0.8899
0.9239	0.9510	0.9751	0.9887	1.0000

Transect 1_10

Area:	0.0005	0.0017	0.0035	0.0059	0.0088
	0.0123	0.0164	0.0216	0.0283	0.0358
	0.0443	0.0543	0.0662	0.0796	0.0952
	0.1130	0.1334	0.1543	0.1757	0.1974
	0.2195	0.2417	0.2644	0.2872	0.3105
	0.3344	0.3592	0.3842	0.4092	0.4343
	0.4595	0.4850	0.5108	0.5370	0.5634
	0.5902	0.6174	0.6449	0.6728	0.7010
	0.7294	0.7581	0.7872	0.8164	0.8462
	0.8762	0.9067	0.9374	0.9686	1.0000

Hrad:	0.0152	0.0375	0.0501	0.0701	0.0890
	0.1017	0.1196	0.1313	0.1396	0.1599
	0.1686	0.1762	0.1822	0.1890	0.1974
	0.2046	0.2036	0.2310	0.2586	0.2840
	0.3132	0.3415	0.3683	0.3969	0.4213
	0.4477	0.4559	0.4864	0.5168	0.5471
	0.5771	0.5982	0.6225	0.6467	0.6713
	0.6926	0.7136	0.7378	0.7577	0.7836
	0.8089	0.8321	0.8536	0.8799	0.8955
	0.9167	0.9392	0.9570	0.9808	1.0000

Width:	0.0312	0.0446	0.0690	0.0839	0.0985
	0.1209	0.1409	0.1938	0.2281	0.2424
	0.2864	0.3405	0.4027	0.4667	0.5224
	0.6209	0.6552	0.6679	0.6793	0.6950
	0.7008	0.7079	0.7178	0.7240	0.7464
	0.7732	0.7879	0.7899	0.7919	0.7939
	0.7962	0.8108	0.8206	0.8303	0.8392
	0.8522	0.8651	0.8741	0.8879	0.8945
	0.9018	0.9110	0.9221	0.9278	0.9450
	0.9558	0.9653	0.9795	0.9875	1.0000

Transect 1_11

Area:	0.0027	0.0145	0.0287	0.0438	0.0593
	0.0751	0.0913	0.1077	0.1245	0.1415
	0.1586	0.1761	0.1938	0.2116	0.2297
	0.2480	0.2664	0.2851	0.3038	0.3228
	0.3421	0.3618	0.3817	0.4017	0.4220
	0.4425	0.4631	0.4840	0.5051	0.5264
	0.5479	0.5696	0.5915	0.6136	0.6359
	0.6584	0.6812	0.7041	0.7273	0.7506
	0.7742	0.7980	0.8221	0.8467	0.8714
	0.8964	0.9217	0.9474	0.9734	1.0000

Hrad:	0.0116	0.0288	0.0533	0.0782	0.1040
	0.1280	0.1538	0.1781	0.2018	0.2272
	0.2511	0.2746	0.2989	0.3236	0.3464
	0.3698	0.3940	0.4178	0.4411	0.4634
	0.4810	0.5015	0.5240	0.5460	0.5678
	0.5896	0.6112	0.6326	0.6536	0.6744
	0.6953	0.7160	0.7367	0.7571	0.7770
	0.7974	0.8176	0.8375	0.8570	0.8768
	0.8965	0.9134	0.9245	0.9419	0.9595
	0.9770	0.9930	1.0059	1.0164	1.0000

Width:	0.3185	0.5024	0.5390	0.5599	0.5701
	0.5868	0.5939	0.6049	0.6170	0.6229
	0.6319	0.6415	0.6485	0.6541	0.6631
	0.6706	0.6764	0.6824	0.6890	0.6967
	0.7113	0.7215	0.7285	0.7359	0.7432
	0.7506	0.7578	0.7651	0.7729	0.7806
	0.7880	0.7955	0.8030	0.8105	0.8184
	0.8258	0.8332	0.8407	0.8486	0.8561
	0.8636	0.8736	0.8893	0.8989	0.9082
	0.9175	0.9282	0.9418	0.9577	1.0000

Hrad:	0.0003	0.0010	0.0024	0.0043	0.0067
	0.0099	0.0139	0.0189	0.0248	0.0315
	0.0389	0.0471	0.0562	0.0663	0.0772
	0.0888	0.1011	0.1143	0.1283	0.1432
	0.1588	0.1750	0.1918	0.2095	0.2279
	0.2470	0.2669	0.2876	0.3094	0.3325
	0.3567	0.3819	0.4084	0.4373	0.4689
	0.5020	0.5355	0.5694	0.6035	0.6380
	0.6727	0.7077	0.7431	0.7791	0.8153
	0.8518	0.8885	0.9256	0.9627	1.0000

Area:	0.0003	0.0010	0.0024	0.0043	0.0067
	0.0099	0.0139	0.0189	0.0248	0.0315
	0.0389	0.0471	0.0562	0.0663	0.0772
	0.0888	0.1011	0.1143	0.1283	0.1432
	0.1588	0.1750	0.1918	0.2095	0.2279
	0.2470	0.2669	0.2876	0.3094	0.3325
	0.3567	0.3819	0.4084	0.4373	0.4689
	0.5020	0.5355	0.5694	0.6035	0.6380
	0.6727	0.7077	0.7431	0.7791	0.8153
	0.8518	0.8885	0.9256	0.9627	1.0000

Width:	0.0003	0.0010	0.0024	0.0043	0.0067
	0.0099	0.0139	0.0189	0.0248	0.0315
	0.0389	0.0471	0.0562	0.0663	0.0772
	0.0888	0.1011	0.1143	0.1283	0.1432
	0.1588	0.1750	0.1918	0.2095	0.2279
	0.2470	0.2669	0.2876	0.3094	0.3325
	0.3567	0.3819	0.4084	0.4373	0.4689
	0.5020	0.5355	0.5694	0.6035	0.6380
	0.6727	0.7077	0.7431	0.7791	0.8153
	0.8518	0.8885	0.9256	0.9627	1.0000

	0.0195	0.0403	0.0548	0.0781	0.0894
	0.1035	0.1166	0.1273	0.1477	0.1681
	0.1876	0.2070	0.2174	0.2370	0.2589
	0.2798	0.2995	0.3146	0.3340	0.3533
	0.3744	0.3989	0.4199	0.4347	0.4561
	0.4779	0.4941	0.5093	0.5205	0.5248
	0.5422	0.5612	0.5490	0.5494	0.5389
	0.5647	0.5967	0.6285	0.6603	0.6919
	0.7234	0.7535	0.7788	0.8087	0.8394
	0.8699	0.9004	0.9332	0.9667	1.0000
Width:					
	0.0140	0.0249	0.0446	0.0552	0.0751
	0.0958	0.1198	0.1491	0.1690	0.1884
	0.2086	0.2287	0.2601	0.2814	0.2998
	0.3189	0.3392	0.3653	0.3863	0.4075
	0.4264	0.4411	0.4593	0.4846	0.5025
	0.5198	0.5431	0.5678	0.5979	0.6371
	0.6617	0.6843	0.7482	0.8006	0.8751
	0.8937	0.9020	0.9100	0.9178	0.9254
	0.9330	0.9419	0.9567	0.9655	0.9730
	0.9806	0.9880	0.9926	0.9963	1.0000
Transect 1_13					
Area:					
	0.0003	0.0012	0.0025	0.0042	0.0064
	0.0089	0.0118	0.0148	0.0182	0.0217
	0.0254	0.0295	0.0340	0.0391	0.0449
	0.0514	0.0589	0.0669	0.0755	0.0849
	0.0951	0.1061	0.1178	0.1303	0.1433
	0.1570	0.1713	0.1869	0.2038	0.2220
	0.2416	0.2619	0.2830	0.3051	0.3283
	0.3541	0.3821	0.4111	0.4407	0.4721
	0.5075	0.5465	0.5900	0.6368	0.6867
	0.7405	0.8003	0.8646	0.9315	1.0000
Hrad:					
	0.0353	0.0775	0.1214	0.1461	0.1823
	0.2262	0.2733	0.3181	0.3642	0.4100
	0.4537	0.4696	0.4913	0.5009	0.4973
	0.5047	0.5225	0.5518	0.5781	0.5935
	0.6206	0.6452	0.6680	0.6999	0.7380
	0.7736	0.7895	0.7904	0.8053	0.8024
	0.8277	0.8744	0.9010	0.9311	0.9352
	0.8982	0.9170	0.9655	1.0108	0.9860
	0.9545	0.9051	0.8912	0.9095	0.9138
	0.9105	0.9335	0.9643	1.0131	1.0000
Width:					

	0.0097	0.0158	0.0205	0.0285	0.0349
	0.0394	0.0430	0.0466	0.0498	0.0528
	0.0560	0.0627	0.0692	0.0779	0.0901
	0.1019	0.1126	0.1212	0.1306	0.1431
	0.1532	0.1643	0.1763	0.1860	0.1941
	0.2028	0.2169	0.2363	0.2530	0.2766
	0.2919	0.2995	0.3140	0.3276	0.3510
	0.3942	0.4168	0.4259	0.4360	0.4907
	0.5317	0.6040	0.6622	0.7004	0.7516
	0.8245	0.9067	0.9540	0.9869	1.0000
Transect 1_14					
Area:					
	0.0021	0.0068	0.0131	0.0207	0.0297
	0.0393	0.0492	0.0593	0.0696	0.0805
	0.0919	0.1037	0.1159	0.1288	0.1423
	0.1564	0.1708	0.1854	0.2002	0.2154
	0.2309	0.2465	0.2625	0.2787	0.2960
	0.3151	0.3361	0.3581	0.3809	0.4044
	0.4293	0.4556	0.4828	0.5110	0.5393
	0.5678	0.5964	0.6251	0.6539	0.6829
	0.7120	0.7413	0.7713	0.8024	0.8340
	0.8660	0.8988	0.9325	0.9662	1.0000
Hrad:					
	0.0178	0.0430	0.0639	0.0856	0.1064
	0.1360	0.1658	0.1976	0.2291	0.2447
	0.2754	0.3054	0.3342	0.3590	0.3805
	0.4065	0.4328	0.4593	0.4810	0.5038
	0.5297	0.5554	0.5758	0.5852	0.6146
	0.6397	0.6608	0.6815	0.6981	0.7124
	0.6646	0.6873	0.7093	0.6102	0.6417
	0.6731	0.7044	0.7342	0.7638	0.7945
	0.8254	0.8560	0.8829	0.9072	0.9343
	0.9613	0.9798	0.9350	0.9675	1.0000
Width:					
	0.1201	0.1589	0.2057	0.2518	0.2796
	0.2895	0.2976	0.3008	0.3063	0.3344
	0.3436	0.3521	0.3721	0.3898	0.4154
	0.4224	0.4284	0.4345	0.4445	0.4536
	0.4603	0.4670	0.4775	0.4836	0.5442
	0.5829	0.6366	0.6627	0.6843	0.7126
	0.7652	0.7919	0.8186	0.8378	0.8408
	0.8439	0.8469	0.8516	0.8563	0.8597
	0.8627	0.8795	0.9064	0.9328	0.9420
	0.9513	0.9950	0.9975	0.9987	1.0000

Transect 1_15					
Area:					
	0.0010	0.0046	0.0093	0.0147	0.0210
	0.0276	0.0344	0.0416	0.0491	0.0569
	0.0650	0.0732	0.0818	0.0906	0.0997
	0.1090	0.1186	0.1287	0.1390	0.1502
	0.1630	0.1780	0.1944	0.2120	0.2315
	0.2537	0.2784	0.3056	0.3349	0.3648
	0.3950	0.4258	0.4569	0.4882	0.5195
	0.5509	0.5823	0.6138	0.6454	0.6770
	0.7087	0.7405	0.7723	0.8042	0.8363
	0.8684	0.9008	0.9335	0.9665	1.0000
Hrad:					
	0.0127	0.0383	0.0617	0.0826	0.1090
	0.1369	0.1648	0.1895	0.2136	0.2394
	0.2664	0.2911	0.3139	0.3393	0.3637
	0.3834	0.4025	0.4218	0.4416	0.4591
	0.4702	0.4775	0.4801	0.4875	0.4498
	0.4447	0.4147	0.4117	0.3776	0.4055
	0.4335	0.4592	0.4886	0.5210	0.5534
	0.5856	0.6179	0.6501	0.6819	0.7137
	0.7454	0.7770	0.8085	0.8394	0.8702
	0.9008	0.9293	0.9552	0.9816	1.0000
Width:					
	0.0831	0.1194	0.1480	0.1758	0.1897
	0.1984	0.2058	0.2162	0.2264	0.2341
	0.2401	0.2477	0.2566	0.2629	0.2698
	0.2798	0.2902	0.3003	0.3100	0.3526
	0.4055	0.4657	0.4996	0.5362	0.6216
	0.6839	0.7760	0.8389	0.8734	0.8859
	0.8974	0.9130	0.9208	0.9225	0.9242
	0.9258	0.9275	0.9292	0.9312	0.9332
	0.9353	0.9373	0.9394	0.9421	0.9458
	0.9510	0.9583	0.9679	0.9788	1.0000
Transect 1_16					
Area:					
	0.0005	0.0012	0.0020	0.0030	0.0040
	0.0051	0.0072	0.0122	0.0195	0.0283
	0.0382	0.0492	0.0612	0.0740	0.0877
	0.1030	0.1204	0.1389	0.1581	0.1789
	0.2015	0.2257	0.2508	0.2761	0.3016
	0.3271	0.3529	0.3788	0.4049	0.4313
	0.4579	0.4847	0.5117	0.5389	0.5663
	0.5938	0.6216	0.6495	0.6776	0.7059
	0.7345	0.7632	0.7922	0.8214	0.8507
Hrad:					
	0.8803	0.9101	0.9400	0.9699	1.0000
	0.0217	0.0471	0.0701	0.0915	0.1118
	0.1305	0.0979	0.0799	0.0860	0.0992
	0.1145	0.1301	0.1492	0.1684	0.1871
	0.1995	0.2027	0.2228	0.2416	0.2455
	0.2654	0.2730	0.3006	0.3288	0.3571
	0.3850	0.4127	0.4394	0.4653	0.4908
	0.5174	0.5438	0.5701	0.5959	0.6218
	0.6475	0.6732	0.6986	0.7237	0.7486
	0.7733	0.7973	0.8211	0.8451	0.8693
	0.8938	0.9189	0.9460	0.9730	1.0000
Width:					
	0.0225	0.0259	0.0292	0.0326	0.0359
	0.0394	0.1164	0.2135	0.2762	0.3109
	0.3451	0.3821	0.4119	0.4409	0.4705
	0.5523	0.5966	0.6254	0.6569	0.7310
	0.7757	0.8295	0.8370	0.8422	0.8468
	0.8519	0.8572	0.8641	0.8722	0.8806
	0.8868	0.8930	0.8992	0.9057	0.9121
	0.9183	0.9245	0.9308	0.9373	0.9439
	0.9506	0.9580	0.9655	0.9725	0.9791
	0.9853	0.9907	0.9938	0.9969	1.0000
Transect 1_17					
Area:					
	0.0007	0.0022	0.0044	0.0073	0.0107
	0.0146	0.0190	0.0241	0.0296	0.0355
	0.0419	0.0489	0.0564	0.0646	0.0737
	0.0838	0.0957	0.1100	0.1260	0.1433
	0.1623	0.1831	0.2054	0.2298	0.2563
	0.2836	0.3113	0.3392	0.3671	0.3952
	0.4233	0.4516	0.4800	0.5084	0.5369
	0.5655	0.5941	0.6229	0.6519	0.6812
	0.7109	0.7409	0.7715	0.8025	0.8340
	0.8659	0.8984	0.9314	0.9652	1.0000
Hrad:					
	0.0231	0.0415	0.0617	0.0810	0.1031
	0.1252	0.1424	0.1621	0.1833	0.2039
	0.2240	0.2447	0.2669	0.2778	0.2971
	0.3129	0.3197	0.3266	0.3356	0.3440
	0.3516	0.3624	0.3708	0.3795	0.3579
	0.3671	0.4017	0.4363	0.4707	0.5051
	0.5394	0.5737	0.6078	0.6335	0.6680
	0.7024	0.7359	0.7647	0.7927	0.8202
	0.8467	0.8676	0.8899	0.9112	0.9327

	0.9547	0.9737	0.9930	0.9988	1.0000
Width:					
	0.0308	0.0528	0.0712	0.0895	0.1037
	0.1165	0.1337	0.1484	0.1613	0.1741
	0.1894	0.2045	0.2176	0.2397	0.2754
	0.3023	0.3695	0.4275	0.4706	0.5107
	0.5628	0.6053	0.6473	0.7314	0.7579
	0.7786	0.7821	0.7855	0.7888	0.7918
	0.7948	0.7978	0.8008	0.8025	0.8038
	0.8050	0.8072	0.8144	0.8224	0.8305
	0.8395	0.8539	0.8668	0.8806	0.8941
	0.9070	0.9227	0.9380	0.9663	1.0000

Transect 1_18

Area:					
	0.0011	0.0031	0.0058	0.0100	0.0156
	0.0226	0.0310	0.0407	0.0518	0.0645
	0.0788	0.0952	0.1139	0.1331	0.1525
	0.1722	0.1921	0.2123	0.2327	0.2534
	0.2742	0.2954	0.3168	0.3386	0.3608
	0.3833	0.4061	0.4291	0.4525	0.4761
	0.5000	0.5241	0.5485	0.5732	0.5982
	0.6236	0.6492	0.6750	0.7010	0.7273
	0.7538	0.7805	0.8073	0.8343	0.8615
	0.8888	0.9163	0.9441	0.9720	1.0000

Hrad:					
	0.0182	0.0397	0.0566	0.0697	0.0812
	0.0918	0.1053	0.1189	0.1303	0.1428
	0.1512	0.1563	0.1679	0.1936	0.2198
	0.2442	0.2691	0.2942	0.3189	0.3432
	0.3668	0.3909	0.4119	0.4328	0.4544
	0.4756	0.4979	0.5196	0.5409	0.5640
	0.5869	0.6068	0.6277	0.6489	0.6655
	0.6888	0.7076	0.7317	0.7565	0.7728
	0.7965	0.8198	0.8435	0.8667	0.8891
	0.9109	0.9321	0.9535	0.9768	1.0000

Width:					
	0.0619	0.0786	0.1257	0.1720	0.2274
	0.2736	0.3211	0.3676	0.4246	0.4789
	0.5506	0.6303	0.6784	0.6875	0.6940
	0.7052	0.7140	0.7218	0.7299	0.7382
	0.7476	0.7557	0.7691	0.7825	0.7939
	0.8059	0.8155	0.8260	0.8366	0.8443
	0.8519	0.8636	0.8738	0.8834	0.8989
	0.9053	0.9174	0.9226	0.9267	0.9411
	0.9464	0.9521	0.9571	0.9626	0.9689

	0.9757	0.9831	0.9901	0.9950	1.0000
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Transect 1_19

Area:					
	0.0013	0.0104	0.0246	0.0394	0.0546
	0.0702	0.0862	0.1026	0.1193	0.1362
	0.1534	0.1708	0.1884	0.2065	0.2249
	0.2434	0.2622	0.2811	0.3002	0.3195
	0.3389	0.3586	0.3785	0.3985	0.4187
	0.4392	0.4598	0.4806	0.5017	0.5230
	0.5445	0.5662	0.5881	0.6103	0.6327
	0.6554	0.6783	0.7015	0.7249	0.7487
	0.7727	0.7969	0.8213	0.8459	0.8708
	0.8959	0.9213	0.9470	0.9732	1.0000

Hrad:					
	0.0088	0.0225	0.0467	0.0727	0.0981
	0.1232	0.1485	0.1708	0.1967	0.2218
	0.2457	0.2702	0.2939	0.3127	0.3368
	0.3617	0.3861	0.4096	0.4333	0.4567
	0.4793	0.5027	0.5258	0.5487	0.5701
	0.5919	0.6140	0.6359	0.6562	0.6771
	0.6984	0.7196	0.7389	0.7578	0.7769
	0.7956	0.8148	0.8339	0.8500	0.8683
	0.8895	0.9088	0.9269	0.9467	0.9665
	0.9822	0.9975	1.0128	1.0198	1.0000

Width:					
	0.1509	0.4631	0.5261	0.5419	0.5567
	0.5702	0.5803	0.6011	0.6068	0.6145
	0.6244	0.6324	0.6414	0.6605	0.6679
	0.6732	0.6792	0.6864	0.6928	0.6996
	0.7072	0.7134	0.7198	0.7263	0.7346
	0.7420	0.7490	0.7559	0.7646	0.7725
	0.7796	0.7868	0.7960	0.8053	0.8145
	0.8238	0.8325	0.8412	0.8529	0.8623
	0.8687	0.8768	0.8861	0.8936	0.9009
	0.9121	0.9236	0.9351	0.9543	1.0000

Transect 1_2

Area:					
	0.0004	0.0015	0.0029	0.0047	0.0069
	0.0094	0.0122	0.0154	0.0189	0.0227
	0.0268	0.0313	0.0361	0.0411	0.0464
	0.0521	0.0582	0.0647	0.0715	0.0788
	0.0867	0.0956	0.1049	0.1153	0.1272
	0.1404	0.1554	0.1723	0.1910	0.2114
	0.2337	0.2578	0.2837	0.3114	0.3410

	0.3723	0.4055	0.4404	0.4772	0.5158
	0.5561	0.5983	0.6424	0.6882	0.7358
	0.7853	0.8365	0.8896	0.9443	1.0000
Hrad:					
	0.0306	0.0662	0.0985	0.1328	0.1652
	0.1969	0.2282	0.2589	0.2885	0.3188
	0.3488	0.3785	0.4102	0.4430	0.4753
	0.4952	0.5170	0.5420	0.5649	0.5852
	0.5965	0.5837	0.6182	0.5734	0.5719
	0.5561	0.5460	0.5437	0.5470	0.5545
	0.5652	0.5784	0.5936	0.6105	0.6287
	0.6480	0.6682	0.6892	0.7109	0.7332
	0.7560	0.7793	0.8029	0.8269	0.8512
	0.8758	0.9006	0.9256	0.9598	1.0000
Width:					
	0.0143	0.0219	0.0294	0.0355	0.0416
	0.0475	0.0534	0.0592	0.0652	0.0709
	0.0766	0.0823	0.0875	0.0923	0.0972
	0.1046	0.1119	0.1186	0.1259	0.1340
	0.1493	0.1630	0.1689	0.2003	0.2215
	0.2517	0.2840	0.3162	0.3485	0.3807
	0.4129	0.4452	0.4774	0.5097	0.5419
	0.5741	0.6064	0.6386	0.6709	0.7031
	0.7353	0.7676	0.7998	0.8321	0.8643
	0.8965	0.9288	0.9610	0.9839	1.0000
Transect 1_20					
Area:					
	0.0017	0.0056	0.0108	0.0175	0.0253
	0.0343	0.0446	0.0566	0.0698	0.0842
	0.0997	0.1163	0.1337	0.1520	0.1709
	0.1905	0.2104	0.2303	0.2503	0.2704
	0.2907	0.3110	0.3314	0.3519	0.3726
	0.3934	0.4144	0.4356	0.4569	0.4784
	0.5001	0.5219	0.5440	0.5665	0.5892
	0.6122	0.6356	0.6593	0.6834	0.7079
	0.7330	0.7587	0.7851	0.8122	0.8405
	0.8699	0.9006	0.9324	0.9656	1.0000
Hrad:					
	0.0190	0.0423	0.0624	0.0839	0.1064
	0.1268	0.1413	0.1571	0.1786	0.1974
	0.2181	0.2398	0.2635	0.2885	0.3112
	0.3389	0.3721	0.4051	0.4379	0.4704
	0.5029	0.5352	0.5668	0.5979	0.6280
	0.6574	0.6866	0.7156	0.7443	0.7729
	0.8012	0.8266	0.8504	0.8728	0.8950
	0.9163	0.9380	0.9604	0.9776	0.9889
	1.0003	1.0130	1.0186	1.0182	1.0099
	1.0051	0.9988	0.9968	0.9904	1.0000
Width:					
	0.0913	0.1330	0.1762	0.2120	0.2415
	0.2740	0.3203	0.3651	0.3963	0.4325
	0.4635	0.4917	0.5146	0.5342	0.5569
	0.5699	0.5726	0.5754	0.5782	0.5811
	0.5837	0.5864	0.5897	0.5933	0.5976
	0.6024	0.6071	0.6120	0.6168	0.6215
	0.6264	0.6333	0.6414	0.6503	0.6594
	0.6690	0.6782	0.6868	0.6991	0.7157
	0.7325	0.7486	0.7701	0.7972	0.8319
	0.8651	0.9014	0.9353	0.9749	1.0000
Transect 1_21					
Area:					
	0.0030	0.0081	0.0147	0.0225	0.0316
	0.0417	0.0529	0.0651	0.0782	0.0922
	0.1069	0.1222	0.1381	0.1549	0.1722
	0.1902	0.2086	0.2274	0.2465	0.2658
	0.2855	0.3056	0.3260	0.3467	0.3678
	0.3893	0.4111	0.4333	0.4557	0.4786
	0.5018	0.5254	0.5492	0.5734	0.5978
	0.6225	0.6475	0.6728	0.6984	0.7242
	0.7503	0.7766	0.8032	0.8300	0.8573
	0.8850	0.9130	0.9415	0.9705	1.0000
Hrad:					
	0.0211	0.0410	0.0610	0.0796	0.0982
	0.1161	0.1343	0.1536	0.1702	0.1915
	0.2119	0.2333	0.2528	0.2695	0.2901
	0.3110	0.3334	0.3578	0.3816	0.4050
	0.4281	0.4496	0.4715	0.4926	0.5140
	0.5357	0.5566	0.5779	0.5988	0.6169
	0.6393	0.6591	0.6808	0.7026	0.7247
	0.7450	0.7661	0.7872	0.8087	0.8304
	0.8521	0.8740	0.8949	0.9134	0.9288
	0.9459	0.9612	0.9745	0.9876	1.0000
Width:					
	0.1470	0.1983	0.2407	0.2828	0.3214
	0.3596	0.3944	0.4242	0.4598	0.4818
	0.5047	0.5242	0.5466	0.5748	0.5938
	0.6117	0.6258	0.6357	0.6459	0.6566
	0.6670	0.6797	0.6914	0.7040	0.7157
	0.7268	0.7387	0.7498	0.7612	0.7759
	0.7851	0.7972	0.8068	0.8161	0.8249

	0.8356	0.8452	0.8547	0.8636	0.8721
	0.8805	0.8886	0.8974	0.9088	0.9231
	0.9355	0.9499	0.9662	0.9827	1.0000
Transect 1_22					
Area:	0.0013	0.0037	0.0068	0.0106	0.0151
	0.0205	0.0270	0.0346	0.0433	0.0530
	0.0635	0.0750	0.0874	0.1008	0.1150
	0.1301	0.1461	0.1630	0.1808	0.1994
	0.2186	0.2386	0.2592	0.2804	0.3024
	0.3250	0.3483	0.3724	0.3971	0.4225
	0.4480	0.4735	0.4992	0.5249	0.5508
	0.5768	0.6029	0.6294	0.6563	0.6837
	0.7116	0.7403	0.7698	0.8000	0.8309
	0.8624	0.8946	0.9277	0.9627	1.0000
Hrad:	0.0256	0.0510	0.0757	0.0974	0.1178
	0.1315	0.1447	0.1617	0.1803	0.2001
	0.2214	0.2393	0.2613	0.2777	0.2998
	0.3203	0.3388	0.3588	0.3797	0.4019
	0.4267	0.4497	0.4738	0.4961	0.5182
	0.5416	0.5630	0.5834	0.6050	0.6341
	0.6698	0.7054	0.7407	0.7752	0.8096
	0.8437	0.8740	0.8980	0.9182	0.9399
	0.9577	0.9632	0.9792	0.9915	1.0116
	1.0271	1.0402	1.0380	1.0067	1.0000
Width:	0.0515	0.0728	0.0904	0.1094	0.1292
	0.1573	0.1881	0.2159	0.2423	0.2670
	0.2892	0.3160	0.3372	0.3656	0.3866
	0.4094	0.4345	0.4578	0.4798	0.5000
	0.5164	0.5346	0.5512	0.5696	0.5880
	0.6047	0.6234	0.6431	0.6613	0.6710
	0.6732	0.6753	0.6776	0.6804	0.6833
	0.6862	0.6920	0.7028	0.7164	0.7288
	0.7442	0.7696	0.7870	0.8075	0.8217
	0.8398	0.8600	0.8936	0.9562	1.0000
Transect 1_23					
Area:	0.0010	0.0035	0.0070	0.0115	0.0170
	0.0237	0.0318	0.0427	0.0545	0.0668
	0.0797	0.0931	0.1070	0.1215	0.1365
	0.1520	0.1681	0.1847	0.2019	0.2196
	0.2378	0.2566	0.2759	0.2957	0.3161
	0.3370	0.3585	0.3805	0.4030	0.4261
	0.4497	0.4738	0.4985	0.5237	0.5494
	0.5757	0.6025	0.6299	0.6578	0.6862
	0.7152	0.7447	0.7747	0.8053	0.8364
	0.8681	0.9003	0.9330	0.9662	1.0000
Hrad:	0.0190	0.0384	0.0601	0.0775	0.0945
	0.1111	0.1190	0.1257	0.1533	0.1800
	0.2059	0.2311	0.2556	0.2797	0.3032
	0.3263	0.3489	0.3713	0.3932	0.4149
	0.4364	0.4575	0.4784	0.4992	0.5197
	0.5400	0.5602	0.5802	0.6001	0.6199
	0.6395	0.6590	0.6784	0.6977	0.7169
	0.7360	0.7550	0.7740	0.7928	0.8116
	0.8304	0.8490	0.8676	0.8862	0.9047
	0.9231	0.9415	0.9599	0.9782	1.0000
Width:	0.0543	0.0901	0.1158	0.1479	0.1796
	0.2131	0.2675	0.3395	0.3554	0.3712
	0.3870	0.4028	0.4186	0.4344	0.4502
	0.4660	0.4819	0.4977	0.5135	0.5293
	0.5451	0.5609	0.5767	0.5925	0.6084
	0.6242	0.6400	0.6558	0.6716	0.6874
	0.7032	0.7191	0.7349	0.7507	0.7665
	0.7823	0.7981	0.8139	0.8297	0.8456
	0.8614	0.8772	0.8930	0.9088	0.9246
	0.9404	0.9562	0.9721	0.9879	1.0000
Transect 1_24					
Area:	0.0004	0.0016	0.0033	0.0056	0.0084
	0.0119	0.0160	0.0206	0.0258	0.0315
	0.0378	0.0448	0.0524	0.0609	0.0706
	0.0815	0.0937	0.1070	0.1212	0.1365
	0.1525	0.1696	0.1877	0.2067	0.2265
	0.2472	0.2688	0.2914	0.3151	0.3396
	0.3649	0.3911	0.4180	0.4460	0.4749
	0.5045	0.5348	0.5660	0.5979	0.6305
	0.6639	0.6979	0.7328	0.7684	0.8050
	0.8425	0.8808	0.9200	0.9598	1.0000
Hrad:	0.0228	0.0441	0.0644	0.0881	0.1087
	0.1265	0.1487	0.1705	0.1911	0.2130
	0.2268	0.2492	0.2636	0.2662	0.2803
	0.2892	0.2956	0.3114	0.3313	0.3529
	0.3681	0.3873	0.4096	0.4296	0.4529

	0.4711	0.4906	0.5093	0.5289	0.5495
	0.5727	0.5936	0.6130	0.6344	0.6549
	0.6798	0.7002	0.7264	0.7479	0.7710
	0.7945	0.8174	0.8394	0.8572	0.8780
	0.8967	0.9187	0.9381	0.9674	1.0000
Width:					
	0.0196	0.0354	0.0513	0.0638	0.0775
	0.0943	0.1076	0.1208	0.1349	0.1476
	0.1665	0.1795	0.1987	0.2287	0.2518
	0.2817	0.3169	0.3434	0.3659	0.3866
	0.4144	0.4380	0.4583	0.4811	0.5000
	0.5247	0.5479	0.5722	0.5957	0.6180
	0.6372	0.6589	0.6820	0.7032	0.7252
	0.7422	0.7639	0.7792	0.7995	0.8179
	0.8357	0.8539	0.8730	0.8965	0.9170
	0.9397	0.9588	0.9807	0.9922	1.0000
Transect 1_25					
Area:					
	0.0003	0.0015	0.0034	0.0062	0.0097
	0.0141	0.0192	0.0251	0.0318	0.0393
	0.0476	0.0566	0.0664	0.0770	0.0884
	0.1005	0.1135	0.1272	0.1416	0.1567
	0.1726	0.1894	0.2069	0.2253	0.2446
	0.2647	0.2857	0.3076	0.3303	0.3539
	0.3783	0.4036	0.4297	0.4567	0.4845
	0.5132	0.5427	0.5731	0.6043	0.6363
	0.6693	0.7029	0.7375	0.7728	0.8089
	0.8457	0.8832	0.9216	0.9606	1.0000
Hrad:					
	0.0179	0.0391	0.0570	0.0768	0.0982
	0.1158	0.1372	0.1581	0.1783	0.1963
	0.2182	0.2396	0.2582	0.2775	0.2979
	0.3186	0.3374	0.3580	0.3786	0.3991
	0.4181	0.4380	0.4555	0.4739	0.4928
	0.5075	0.5284	0.5455	0.5652	0.5824
	0.6026	0.6222	0.6419	0.6594	0.6787
	0.6987	0.7184	0.7360	0.7582	0.7731
	0.7963	0.8154	0.8352	0.8585	0.8767
	0.9009	0.9200	0.9436	0.9681	1.0000
Width:					
	0.0183	0.0373	0.0600	0.0805	0.0989
	0.1216	0.1401	0.1590	0.1784	0.2004
	0.2181	0.2363	0.2573	0.2775	0.2967
	0.3155	0.3363	0.3552	0.3738	0.3927
	0.4129	0.4323	0.4542	0.4754	0.4962

	0.5216	0.5407	0.5640	0.5845	0.6077
	0.6279	0.6488	0.6695	0.6927	0.7139
	0.7345	0.7555	0.7787	0.7971	0.8232
	0.8406	0.8622	0.8832	0.9002	0.9228
	0.9388	0.9601	0.9767	0.9922	1.0000
Transect 1_3					
Area:					
	0.0017	0.0052	0.0097	0.0148	0.0205
	0.0265	0.0327	0.0392	0.0461	0.0534
	0.0614	0.0699	0.0790	0.0889	0.0993
	0.1104	0.1223	0.1348	0.1481	0.1622
	0.1770	0.1925	0.2089	0.2260	0.2440
	0.2627	0.2823	0.3026	0.3235	0.3457
	0.3691	0.3941	0.4203	0.4476	0.4759
	0.5054	0.5358	0.5671	0.5995	0.6330
	0.6672	0.7022	0.7377	0.7736	0.8099
	0.8467	0.8841	0.9220	0.9606	1.0000
Hrad:					
	0.0253	0.0494	0.0806	0.1086	0.1400
	0.1733	0.2057	0.2338	0.2577	0.2782
	0.2962	0.3178	0.3319	0.3488	0.3683
	0.3841	0.3996	0.4159	0.4315	0.4492
	0.4639	0.4814	0.4976	0.5140	0.5298
	0.5464	0.5648	0.5866	0.6010	0.6033
	0.6112	0.6127	0.6261	0.6419	0.6577
	0.6729	0.6922	0.7113	0.7238	0.7435
	0.7688	0.7938	0.8236	0.8544	0.8844
	0.9105	0.9373	0.9630	0.9821	1.0000
Width:					
	0.0663	0.1048	0.1207	0.1363	0.1464
	0.1526	0.1588	0.1675	0.1787	0.1921
	0.2073	0.2199	0.2381	0.2547	0.2697
	0.2874	0.3059	0.3241	0.3432	0.3609
	0.3814	0.3999	0.4197	0.4396	0.4604
	0.4808	0.4998	0.5157	0.5381	0.5729
	0.6038	0.6431	0.6712	0.6973	0.7236
	0.7510	0.7740	0.7972	0.8282	0.8513
	0.8679	0.8846	0.8958	0.9054	0.9158
	0.9300	0.9432	0.9573	0.9781	1.0000
Transect 1_4					
Area:					
	0.0011	0.0033	0.0060	0.0094	0.0136
	0.0184	0.0240	0.0303	0.0374	0.0454
	0.0540	0.0632	0.0732	0.0837	0.0949

	0.1069	0.1196	0.1329	0.1467	0.1611
	0.1761	0.1918	0.2083	0.2257	0.2437
	0.2626	0.2823	0.3028	0.3241	0.3463
	0.3693	0.3931	0.4180	0.4437	0.4703
	0.4977	0.5262	0.5554	0.5857	0.6168
	0.6489	0.6821	0.7164	0.7518	0.7885
	0.8268	0.8669	0.9088	0.9531	1.0000
Hrad:					
	0.0321	0.0647	0.0968	0.1177	0.1445
	0.1729	0.1944	0.2185	0.2409	0.2634
	0.2921	0.3140	0.3435	0.3725	0.3960
	0.4144	0.4417	0.4721	0.5020	0.5264
	0.5522	0.5763	0.5883	0.6125	0.6375
	0.6533	0.6766	0.6982	0.7153	0.7370
	0.7616	0.7757	0.7942	0.8191	0.8369
	0.8575	0.8790	0.8982	0.9200	0.9395
	0.9575	0.9728	0.9916	1.0056	1.0136
	1.0187	1.0172	1.0194	1.0071	1.0000
Width:					
	0.0356	0.0512	0.0622	0.0798	0.0941
	0.1066	0.1235	0.1387	0.1551	0.1720
	0.1845	0.2010	0.2127	0.2244	0.2391
	0.2575	0.2703	0.2810	0.2917	0.3054
	0.3183	0.3321	0.3534	0.3678	0.3817
	0.4013	0.4166	0.4330	0.4524	0.4692
	0.4842	0.5061	0.5257	0.5411	0.5613
	0.5798	0.5980	0.6178	0.6360	0.6560
	0.6772	0.7006	0.7220	0.7471	0.7775
	0.8113	0.8520	0.8913	0.9462	1.0000
Transect 1_5					
Area:					
	0.0012	0.0034	0.0065	0.0103	0.0148
	0.0201	0.0262	0.0330	0.0405	0.0488
	0.0578	0.0675	0.0779	0.0891	0.1010
	0.1136	0.1269	0.1409	0.1557	0.1712
	0.1875	0.2044	0.2220	0.2403	0.2593
	0.2792	0.2999	0.3215	0.3439	0.3672
	0.3913	0.4163	0.4420	0.4685	0.4959
	0.5242	0.5534	0.5835	0.6145	0.6461
	0.6785	0.7114	0.7450	0.7793	0.8143
	0.8500	0.8862	0.9231	0.9608	1.0000
Hrad:					
	0.0260	0.0513	0.0753	0.0993	0.1215
	0.1425	0.1651	0.1855	0.2078	0.2285
	0.2499	0.2699	0.2923	0.3116	0.3326

	0.3531	0.3749	0.3958	0.4149	0.4343
	0.4562	0.4782	0.4993	0.5201	0.5393
	0.5547	0.5715	0.5899	0.6073	0.6255
	0.6435	0.6624	0.6829	0.7023	0.7186
	0.7363	0.7527	0.7705	0.7931	0.8149
	0.8395	0.8634	0.8854	0.9073	0.9302
	0.9545	0.9782	1.0005	1.0169	1.0000
Width:					
	0.0445	0.0659	0.0857	0.1035	0.1221
	0.1414	0.1587	0.1780	0.1951	0.2135
	0.2311	0.2500	0.2665	0.2857	0.3035
	0.3216	0.3384	0.3559	0.3751	0.3941
	0.4108	0.4272	0.4444	0.4616	0.4805
	0.5030	0.5244	0.5446	0.5660	0.5867
	0.6078	0.6281	0.6469	0.6668	0.6898
	0.7116	0.7349	0.7571	0.7745	0.7926
	0.8079	0.8236	0.8411	0.8587	0.8752
	0.8902	0.9058	0.9225	0.9447	1.0000
Transect 1_6					
Area:					
	0.0013	0.0038	0.0068	0.0102	0.0142
	0.0186	0.0237	0.0297	0.0363	0.0436
	0.0517	0.0605	0.0701	0.0805	0.0921
	0.1045	0.1180	0.1324	0.1476	0.1636
	0.1803	0.1977	0.2160	0.2351	0.2551
	0.2759	0.2975	0.3200	0.3433	0.3674
	0.3925	0.4183	0.4448	0.4723	0.5006
	0.5295	0.5591	0.5892	0.6199	0.6511
	0.6829	0.7154	0.7486	0.7822	0.8164
	0.8512	0.8866	0.9232	0.9610	1.0000
Hrad:					
	0.0253	0.0539	0.0827	0.1096	0.1337
	0.1537	0.1696	0.1850	0.2058	0.2253
	0.2393	0.2588	0.2777	0.2909	0.3012
	0.3190	0.3326	0.3522	0.3738	0.3955
	0.4164	0.4372	0.4552	0.4738	0.4942
	0.5135	0.5317	0.5507	0.5717	0.5902
	0.6089	0.6303	0.6501	0.6683	0.6884
	0.7128	0.7393	0.7643	0.7897	0.8141
	0.8412	0.8581	0.8824	0.9120	0.9347
	0.9554	0.9759	0.9830	0.9822	1.0000
Width:					
	0.0517	0.0700	0.0819	0.0933	0.1058
	0.1210	0.1399	0.1603	0.1764	0.1934
	0.2158	0.2338	0.2525	0.2767	0.3055

0.3276	0.3547	0.3759	0.3949	0.4135
0.4328	0.4521	0.4744	0.4962	0.5161
0.5371	0.5594	0.5809	0.6004	0.6224
0.6444	0.6635	0.6840	0.7065	0.7270
0.7427	0.7561	0.7707	0.7848	0.7997
0.8117	0.8336	0.8482	0.8576	0.8733
0.8907	0.9084	0.9391	0.9784	1.0000

Transect 1_7

Area:	0.0003	0.0011	0.0025	0.0055	0.0089
	0.0126	0.0168	0.0217	0.0274	0.0341
	0.0416	0.0500	0.0592	0.0693	0.0803
	0.0921	0.1049	0.1184	0.1328	0.1481
	0.1643	0.1810	0.1983	0.2163	0.2351
	0.2546	0.2751	0.2961	0.3179	0.3407
	0.3643	0.3887	0.4140	0.4402	0.4672
	0.4953	0.5242	0.5541	0.5850	0.6170
	0.6498	0.6836	0.7185	0.7546	0.7919
	0.8307	0.8712	0.9131	0.9561	1.0000

Hrad:	0.0224	0.0492	0.0486	0.0750	0.1101
	0.1416	0.1659	0.1795	0.1936	0.2124
	0.2304	0.2501	0.2696	0.2886	0.3106
	0.3281	0.3520	0.3731	0.3938	0.4124
	0.4389	0.4681	0.4959	0.5184	0.5407
	0.5592	0.5839	0.6106	0.6275	0.6465
	0.6667	0.6882	0.7088	0.7287	0.7468
	0.7640	0.7859	0.8028	0.8176	0.8380
	0.8599	0.8756	0.8909	0.9096	0.9177
	0.9198	0.9297	0.9448	0.9677	1.0000

Width:	0.0142	0.0231	0.0573	0.0732	0.0807
	0.0890	0.1010	0.1206	0.1415	0.1604
	0.1805	0.1997	0.2194	0.2400	0.2584
	0.2808	0.2978	0.3173	0.3372	0.3592
	0.3743	0.3868	0.3999	0.4172	0.4348
	0.4553	0.4711	0.4849	0.5066	0.5269
	0.5464	0.5649	0.5841	0.6041	0.6257
	0.6483	0.6671	0.6902	0.7156	0.7364
	0.7558	0.7808	0.8066	0.8298	0.8631
	0.9034	0.9374	0.9668	0.9883	1.0000

Transect 1_8

Area:	0.0002	0.0009	0.0020	0.0034	0.0054
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	0.0080	0.0116	0.0156	0.0206	0.0262
	0.0321	0.0382	0.0446	0.0510	0.0577
	0.0644	0.0713	0.0785	0.0859	0.0948
	0.1052	0.1166	0.1301	0.1453	0.1609
	0.1788	0.1999	0.2222	0.2472	0.2749
	0.3041	0.3349	0.3668	0.3994	0.4328
	0.4667	0.5010	0.5356	0.5708	0.6063
	0.6424	0.6789	0.7159	0.7531	0.7909
	0.8302	0.8710	0.9132	0.9565	1.0000

Hrad:	0.0221	0.0452	0.0672	0.0952	0.1062
	0.1084	0.1324	0.1572	0.1675	0.2000
	0.2300	0.2668	0.3026	0.3393	0.3761
	0.4120	0.4424	0.4705	0.4969	0.4126
	0.4249	0.4342	0.3809	0.4124	0.4453
	0.3854	0.3987	0.4276	0.4043	0.4197
	0.4458	0.4639	0.4952	0.5255	0.5621
	0.5943	0.6336	0.6731	0.7039	0.7384
	0.7707	0.8053	0.8412	0.8787	0.9139
	0.9455	0.9744	0.9969	0.9592	1.0000

Width:	0.0101	0.0189	0.0294	0.0356	0.0514
	0.0742	0.0874	0.0995	0.1232	0.1310
	0.1396	0.1434	0.1474	0.1506	0.1535
	0.1566	0.1615	0.1670	0.1736	0.2301
	0.2480	0.2796	0.3421	0.3528	0.3617
	0.4645	0.5022	0.5264	0.6123	0.6557
	0.6831	0.7229	0.7416	0.7610	0.7708
	0.7860	0.7914	0.7964	0.8114	0.8215
	0.8339	0.8435	0.8513	0.8572	0.8824
	0.9227	0.9521	0.9827	0.9973	1.0000

Transect 1_9

Area:	0.0002	0.0007	0.0014	0.0041	0.0075
	0.0116	0.0178	0.0270	0.0378	0.0497
	0.0624	0.0760	0.0912	0.1072	0.1243
	0.1422	0.1611	0.1808	0.2008	0.2214
	0.2423	0.2637	0.2856	0.3079	0.3308
	0.3542	0.3781	0.4026	0.4276	0.4533
	0.4794	0.5058	0.5324	0.5590	0.5858
	0.6126	0.6395	0.6665	0.6936	0.7207
	0.7480	0.7755	0.8030	0.8307	0.8586
	0.8866	0.9146	0.9429	0.9713	1.0000
Hrad:	0.0153	0.0358	0.0375	0.0352	0.0600

	0.0745	0.0761	0.0883	0.1061	0.1270
	0.1471	0.1674	0.1831	0.1993	0.2175
	0.2320	0.2499	0.2622	0.2844	0.3081
	0.3301	0.3508	0.3719	0.3927	0.4124
	0.4316	0.4501	0.4678	0.4856	0.5045
	0.5249	0.5507	0.5768	0.6028	0.6298
	0.6567	0.6836	0.7104	0.7361	0.7616
	0.7872	0.8122	0.8366	0.8605	0.8849
	0.9100	0.9349	0.9568	0.9787	1.0000
Width:					
	0.0139	0.0193	0.0366	0.1157	0.1260
	0.1694	0.2682	0.3502	0.3980	0.4288
	0.4555	0.4992	0.5440	0.5748	0.6070
	0.6429	0.6710	0.6905	0.7074	0.7198
	0.7352	0.7530	0.7691	0.7856	0.8034
	0.8220	0.8414	0.8621	0.8822	0.9000
	0.9150	0.9200	0.9243	0.9286	0.9314
	0.9340	0.9366	0.9392	0.9431	0.9472
	0.9509	0.9554	0.9605	0.9658	0.9706
	0.9746	0.9785	0.9856	0.9926	1.0000
Transect 2_1					
Area:					
	0.0013	0.0039	0.0074	0.0120	0.0174
	0.0235	0.0305	0.0382	0.0468	0.0562
	0.0667	0.0781	0.0907	0.1042	0.1190
	0.1353	0.1532	0.1729	0.1935	0.2144
	0.2358	0.2575	0.2795	0.3019	0.3247
	0.3480	0.3715	0.3952	0.4194	0.4438
	0.4686	0.4937	0.5191	0.5449	0.5709
	0.5972	0.6240	0.6510	0.6782	0.7059
	0.7339	0.7621	0.7907	0.8197	0.8490
	0.8786	0.9085	0.9389	0.9694	1.0000
Hrad:					
	0.0209	0.0387	0.0564	0.0744	0.0932
	0.1097	0.1291	0.1429	0.1621	0.1715
	0.1874	0.1985	0.2157	0.2257	0.2384
	0.2408	0.2476	0.2595	0.2868	0.3124
	0.3361	0.3607	0.3870	0.4097	0.4325
	0.4573	0.4832	0.5084	0.5298	0.5536
	0.5758	0.6006	0.6238	0.6468	0.6713
	0.6877	0.7124	0.7372	0.7593	0.7775
	0.8033	0.8202	0.8439	0.8634	0.8867
	0.9061	0.9249	0.9469	0.9735	1.0000
Width:					
	0.0655	0.1008	0.1319	0.1616	0.1865

	0.2147	0.2364	0.2678	0.2889	0.3278
	0.3564	0.3939	0.4208	0.4620	0.4995
	0.5622	0.6193	0.6667	0.6751	0.6869
	0.7020	0.7143	0.7228	0.7374	0.7513
	0.7614	0.7691	0.7778	0.7919	0.8020
	0.8143	0.8224	0.8325	0.8427	0.8506
	0.8687	0.8761	0.8833	0.8934	0.9082
	0.9137	0.9293	0.9372	0.9495	0.9576
	0.9697	0.9823	0.9916	0.9958	1.0000
Transect 2_10					
Area:					
	0.0005	0.0017	0.0037	0.0060	0.0087
	0.0118	0.0155	0.0196	0.0242	0.0293
	0.0351	0.0416	0.0489	0.0588	0.0700
	0.0828	0.0969	0.1128	0.1306	0.1504
	0.1720	0.1951	0.2194	0.2443	0.2697
	0.2952	0.3210	0.3470	0.3732	0.3996
	0.4261	0.4529	0.4798	0.5069	0.5343
	0.5618	0.5895	0.6174	0.6456	0.6740
	0.7027	0.7318	0.7611	0.7909	0.8212
	0.8522	0.8849	0.9208	0.9593	1.0000
Hrad:					
	0.0239	0.0437	0.0696	0.0976	0.1261
	0.1473	0.1648	0.1873	0.2071	0.2245
	0.2356	0.2533	0.2511	0.2267	0.2442
	0.2566	0.2696	0.2839	0.2867	0.3037
	0.3185	0.3406	0.3687	0.4040	0.4400
	0.4788	0.5158	0.5523	0.5898	0.6271
	0.6645	0.7014	0.7375	0.7734	0.8095
	0.8452	0.8804	0.9156	0.9492	0.9802
	1.0099	1.0420	1.0705	1.0942	1.1120
	1.1304	1.0854	1.0209	1.0091	1.0000
Width:					
	0.0195	0.0394	0.0524	0.0617	0.0693
	0.0803	0.0937	0.1044	0.1164	0.1302
	0.1486	0.1638	0.1945	0.2591	0.2866
	0.3225	0.3594	0.3970	0.4554	0.4951
	0.5400	0.5729	0.5950	0.6047	0.6128
	0.6165	0.6222	0.6281	0.6326	0.6370
	0.6411	0.6455	0.6504	0.6552	0.6598
	0.6645	0.6694	0.6741	0.6798	0.6873
	0.6956	0.7020	0.7107	0.7226	0.7383
	0.7536	0.8151	0.9019	0.9506	1.0000
Transect 2_11					

Area:	0.0009	0.0029	0.0060	0.0101	0.0150
	0.0205	0.0268	0.0337	0.0412	0.0492
	0.0576	0.0664	0.0757	0.0856	0.0963
	0.1076	0.1196	0.1323	0.1456	0.1594
	0.1738	0.1888	0.2046	0.2212	0.2387
	0.2570	0.2760	0.2961	0.3172	0.3392
	0.3623	0.3867	0.4121	0.4385	0.4659
	0.4943	0.5234	0.5533	0.5842	0.6160
	0.6488	0.6829	0.7182	0.7545	0.7927
	0.8329	0.8738	0.9152	0.9573	1.0000

Hrad:	0.0262	0.0516	0.0740	0.0932	0.1240
	0.1506	0.1759	0.2008	0.2285	0.2583
	0.2882	0.3165	0.3424	0.3569	0.3764
	0.3974	0.4184	0.4383	0.4635	0.4883
	0.5081	0.5277	0.5489	0.5608	0.5827
	0.6038	0.6218	0.6415	0.6612	0.6804
	0.6950	0.7068	0.7281	0.7458	0.7659
	0.7867	0.8102	0.8278	0.8501	0.8695
	0.8839	0.9018	0.9210	0.9345	0.9364
	0.8835	0.9150	0.9457	0.9736	1.0000

Width:	0.0343	0.0569	0.0807	0.1081	0.1210
	0.1364	0.1523	0.1677	0.1803	0.1904
	0.1998	0.2098	0.2210	0.2398	0.2558
	0.2709	0.2859	0.3018	0.3141	0.3263
	0.3419	0.3578	0.3735	0.3975	0.4146
	0.4320	0.4540	0.4776	0.4990	0.5229
	0.5506	0.5797	0.6007	0.6242	0.6471
	0.6666	0.6838	0.7067	0.7261	0.7481
	0.7749	0.8056	0.8292	0.8619	0.9079
	0.9427	0.9548	0.9677	0.9832	1.0000

Transect 2_12

Area:	0.0011	0.0034	0.0069	0.0110	0.0157
	0.0211	0.0269	0.0334	0.0406	0.0484
	0.0570	0.0662	0.0762	0.0867	0.0978
	0.1093	0.1216	0.1343	0.1475	0.1613
	0.1756	0.1902	0.2053	0.2211	0.2377
	0.2552	0.2734	0.2924	0.3123	0.3328
	0.3540	0.3761	0.3992	0.4233	0.4482
	0.4740	0.5007	0.5285	0.5581	0.5889
	0.6207	0.6533	0.6870	0.7237	0.7659
	0.8096	0.8549	0.9013	0.9492	1.0000

Hrad:	0.0302	0.0593	0.0935	0.1287	0.1613
	0.1954	0.2260	0.2534	0.2820	0.3064
	0.3302	0.3565	0.3845	0.4159	0.4474
	0.4767	0.5026	0.5351	0.5658	0.5958
	0.6275	0.6615	0.6917	0.7067	0.7205
	0.7407	0.7588	0.7787	0.8011	0.8273
	0.8444	0.8610	0.8765	0.8960	0.9131
	0.9332	0.9543	0.9543	0.9523	0.9739
	0.9988	1.0212	1.0307	1.0330	0.9178
	0.9355	0.9707	0.9910	0.9973	1.0000

Width:	0.0341	0.0563	0.0715	0.0831	0.0951
	0.1050	0.1160	0.1285	0.1401	0.1537
	0.1679	0.1808	0.1928	0.2029	0.2126
	0.2232	0.2353	0.2442	0.2536	0.2633
	0.2721	0.2796	0.2886	0.3042	0.3209
	0.3350	0.3504	0.3652	0.3791	0.3912
	0.4078	0.4249	0.4430	0.4595	0.4775
	0.4942	0.5105	0.5388	0.5703	0.5885
	0.6047	0.6226	0.6486	0.7279	0.8116
	0.8413	0.8557	0.8834	0.9241	1.0000

Transect 2_13

Area:	0.0008	0.0027	0.0051	0.0085	0.0133
	0.0196	0.0272	0.0360	0.0456	0.0559
	0.0668	0.0783	0.0903	0.1029	0.1160
	0.1297	0.1440	0.1588	0.1743	0.1903
	0.2070	0.2245	0.2426	0.2612	0.2806
	0.3008	0.3217	0.3433	0.3656	0.3888
	0.4128	0.4380	0.4642	0.4914	0.5195
	0.5483	0.5776	0.6076	0.6381	0.6690
	0.7003	0.7322	0.7644	0.7970	0.8300
	0.8634	0.8971	0.9312	0.9655	1.0000

Hrad:	0.0174	0.0435	0.0644	0.0754	0.0816
	0.0985	0.1149	0.1371	0.1590	0.1844
	0.2078	0.2327	0.2562	0.2802	0.3021
	0.3242	0.3455	0.3661	0.3867	0.4054
	0.4234	0.4407	0.4604	0.4813	0.4931
	0.5117	0.5292	0.5468	0.5604	0.5753
	0.5863	0.5958	0.6067	0.6176	0.6365
	0.6579	0.6796	0.6998	0.7233	0.7476
	0.7696	0.7928	0.8187	0.8437	0.8666
	0.8908	0.9155	0.9409	0.9705	1.0000

Width:	0.0456	0.0618	0.0808	0.1139	0.1647
	0.2013	0.2395	0.2655	0.2900	0.3067
	0.3251	0.3401	0.3564	0.3712	0.3882
	0.4044	0.4212	0.4384	0.4553	0.4744
	0.4942	0.5147	0.5325	0.5485	0.5751
	0.5941	0.6143	0.6344	0.6593	0.6830
	0.7117	0.7430	0.7733	0.8042	0.8245
	0.8412	0.8572	0.8751	0.8885	0.9006
	0.9153	0.9283	0.9379	0.9483	0.9608
	0.9718	0.9818	0.9911	0.9955	1.0000

Transect 2_14

Area:	0.0005	0.0019	0.0037	0.0060	0.0089
	0.0125	0.0168	0.0220	0.0284	0.0360
	0.0446	0.0547	0.0658	0.0778	0.0907
	0.1043	0.1186	0.1336	0.1494	0.1660
	0.1833	0.2013	0.2198	0.2390	0.2588
	0.2793	0.3004	0.3222	0.3448	0.3680
	0.3919	0.4166	0.4420	0.4681	0.4949
	0.5226	0.5510	0.5802	0.6103	0.6415
	0.6739	0.7069	0.7409	0.7756	0.8115
	0.8480	0.8851	0.9229	0.9613	1.0000

Hrad:	0.0221	0.0455	0.0703	0.0898	0.1075
	0.1240	0.1391	0.1471	0.1580	0.1744
	0.1860	0.1999	0.2216	0.2444	0.2678
	0.2922	0.3165	0.3376	0.3603	0.3836
	0.4064	0.4310	0.4554	0.4792	0.5029
	0.5245	0.5473	0.5677	0.5880	0.6106
	0.6310	0.6498	0.6711	0.6915	0.7096
	0.7281	0.7490	0.7648	0.7790	0.7875
	0.8069	0.8208	0.8438	0.8578	0.8736
	0.8975	0.9202	0.9424	0.9691	1.0000

Width:	0.0248	0.0413	0.0529	0.0671	0.0834
	0.1013	0.1215	0.1500	0.1808	0.2073
	0.2413	0.2749	0.2985	0.3201	0.3405
	0.3588	0.3767	0.3979	0.4171	0.4353
	0.4536	0.4696	0.4853	0.5015	0.5174
	0.5353	0.5518	0.5706	0.5895	0.6059
	0.6245	0.6446	0.6621	0.6805	0.7013
	0.7216	0.7396	0.7627	0.7877	0.8191
	0.8393	0.8651	0.8813	0.9071	0.9314
	0.9468	0.9634	0.9804	0.9925	1.0000

Transect 2_15

Area:	0.0002	0.0013	0.0033	0.0056	0.0081
	0.0110	0.0146	0.0197	0.0266	0.0353
	0.0459	0.0575	0.0702	0.0841	0.0991
	0.1154	0.1326	0.1504	0.1690	0.1882
	0.2080	0.2282	0.2489	0.2700	0.2915
	0.3134	0.3358	0.3586	0.3818	0.4054
	0.4294	0.4537	0.4785	0.5037	0.5293
	0.5554	0.5819	0.6091	0.6367	0.6650
	0.6943	0.7248	0.7563	0.7888	0.8221
	0.8562	0.8909	0.9265	0.9630	1.0000

Hrad:	0.0184	0.0301	0.0575	0.0872	0.1134
	0.1280	0.1306	0.1205	0.1266	0.1362
	0.1538	0.1769	0.1972	0.2164	0.2364
	0.2569	0.2817	0.3080	0.3336	0.3599
	0.3869	0.4158	0.4445	0.4723	0.4994
	0.5267	0.5539	0.5810	0.6078	0.6352
	0.6627	0.6894	0.7134	0.7383	0.7624
	0.7858	0.8074	0.8273	0.8505	0.8606
	0.8681	0.8700	0.8811	0.8927	0.9080
	0.9276	0.9440	0.9574	0.9739	1.0000

Width:	0.0113	0.0466	0.0577	0.0638	0.0710
	0.0854	0.1112	0.1632	0.2104	0.2654
	0.2990	0.3255	0.3566	0.3891	0.4199
	0.4497	0.4713	0.4891	0.5073	0.5237
	0.5382	0.5496	0.5606	0.5723	0.5844
	0.5958	0.6070	0.6179	0.6288	0.6388
	0.6484	0.6586	0.6711	0.6827	0.6947
	0.7072	0.7212	0.7367	0.7491	0.7733
	0.8003	0.8338	0.8591	0.8843	0.9062
	0.9238	0.9445	0.9686	0.9893	1.0000

Transect 2_16

Area:	0.0018	0.0057	0.0109	0.0176	0.0255
	0.0345	0.0448	0.0562	0.0691	0.0832
	0.0989	0.1156	0.1332	0.1518	0.1712
	0.1914	0.2121	0.2333	0.2547	0.2763
	0.2981	0.3202	0.3424	0.3647	0.3872
	0.4099	0.4328	0.4559	0.4791	0.5024
	0.5259	0.5495	0.5733	0.5973	0.6214
	0.6457	0.6701	0.6946	0.7193	0.7441

	0.7690	0.7941	0.8194	0.8448	0.8703
	0.8959	0.9217	0.9476	0.9738	1.0000
Hrad:	0.0160	0.0319	0.0485	0.0638	0.0791
	0.0944	0.1089	0.1217	0.1351	0.1461
	0.1599	0.1770	0.1938	0.2109	0.2263
	0.2459	0.2669	0.2881	0.3115	0.3350
	0.3579	0.3810	0.4043	0.4278	0.4510
	0.4731	0.4960	0.5190	0.5423	0.5654
	0.5872	0.6091	0.6311	0.6541	0.6769
	0.6987	0.7205	0.7427	0.7649	0.7874
	0.8095	0.8298	0.8515	0.8737	0.8956
	0.9171	0.9379	0.9578	0.9789	1.0000
Width:	0.1152	0.1772	0.2249	0.2754	0.3219
	0.3655	0.4111	0.4623	0.5113	0.5693
	0.6185	0.6529	0.6878	0.7198	0.7566
	0.7785	0.7950	0.8100	0.8179	0.8251
	0.8330	0.8404	0.8470	0.8527	0.8588
	0.8666	0.8727	0.8785	0.8834	0.8887
	0.8956	0.9023	0.9086	0.9133	0.9181
	0.9242	0.9301	0.9353	0.9404	0.9450
	0.9500	0.9570	0.9623	0.9669	0.9717
	0.9769	0.9828	0.9894	0.9947	1.0000
Transect 2_17					
Area:	0.0014	0.0045	0.0089	0.0143	0.0206
	0.0280	0.0363	0.0457	0.0559	0.0672
	0.0793	0.0923	0.1062	0.1208	0.1361
	0.1521	0.1689	0.1863	0.2043	0.2230
	0.2423	0.2621	0.2824	0.3033	0.3246
	0.3465	0.3690	0.3919	0.4153	0.4391
	0.4633	0.4881	0.5133	0.5390	0.5650
	0.5915	0.6185	0.6459	0.6738	0.7021
	0.7308	0.7598	0.7891	0.8186	0.8484
	0.8784	0.9086	0.9389	0.9694	1.0000
Hrad:	0.0186	0.0365	0.0558	0.0756	0.0921
	0.1102	0.1257	0.1431	0.1601	0.1757
	0.1939	0.2108	0.2285	0.2483	0.2673
	0.2844	0.3034	0.3236	0.3420	0.3605
	0.3806	0.4009	0.4213	0.4418	0.4607
	0.4795	0.4995	0.5200	0.5410	0.5609
	0.5803	0.6001	0.6195	0.6404	0.6603
	0.6795	0.6993	0.7172	0.7356	0.7557
	0.7769	0.8009	0.8245	0.8460	0.8712
	0.8966	0.9229	0.9490	0.9746	1.0000
Width:	0.0763	0.1241	0.1601	0.1891	0.2240
	0.2541	0.2889	0.3192	0.3494	0.3825
	0.4093	0.4380	0.4648	0.4868	0.5093
	0.5351	0.5569	0.5758	0.5976	0.6187
	0.6366	0.6538	0.6704	0.6865	0.7047
	0.7229	0.7387	0.7537	0.7676	0.7829
	0.7985	0.8134	0.8286	0.8416	0.8557
	0.8706	0.8845	0.9006	0.9160	0.9291
	0.9407	0.9487	0.9570	0.9677	0.9739
	0.9797	0.9845	0.9894	0.9947	1.0000
Transect 2_18					
Area:	0.0007	0.0019	0.0034	0.0051	0.0071
	0.0091	0.0114	0.0138	0.0163	0.0189
	0.0217	0.0246	0.0277	0.0312	0.0351
	0.0394	0.0442	0.0497	0.0564	0.0658
	0.0778	0.0926	0.1094	0.1280	0.1483
	0.1703	0.1942	0.2199	0.2476	0.2768
	0.3075	0.3393	0.3718	0.4049	0.4386
	0.4728	0.5074	0.5425	0.5780	0.6140
	0.6504	0.6873	0.7246	0.7625	0.8008
	0.8396	0.8790	0.9188	0.9592	1.0000
Hrad:	0.0279	0.0552	0.0869	0.1160	0.1434
	0.1725	0.2016	0.2298	0.2571	0.2836
	0.3095	0.3348	0.3398	0.3453	0.3527
	0.3529	0.3534	0.3443	0.2889	0.2499
	0.2370	0.2378	0.2531	0.2705	0.2873
	0.3053	0.3216	0.3373	0.3565	0.3789
	0.4037	0.4314	0.4653	0.4980	0.5306
	0.5639	0.5977	0.6318	0.6635	0.6967
	0.7288	0.7609	0.7912	0.8220	0.8535
	0.8823	0.9115	0.9410	0.9706	1.0000
Width:	0.0242	0.0345	0.0393	0.0441	0.0490
	0.0527	0.0560	0.0593	0.0627	0.0660
	0.0693	0.0726	0.0807	0.0895	0.0985
	0.1105	0.1239	0.1432	0.1643	0.1863
	0.3276	0.3886	0.4316	0.4725	0.5157
	0.5575	0.6034	0.6516	0.6941	0.7303
	0.7615	0.7863	0.7989	0.8130	0.8264
	0.8382	0.8488	0.8585	0.8710	0.8812

	0.8923	0.9032	0.9158	0.9276	0.9382
	0.9515	0.9643	0.9764	0.9882	1.0000
Transect 2_19					
Area:	0.0013	0.0030	0.0050	0.0071	0.0095
	0.0121	0.0148	0.0177	0.0208	0.0240
	0.0273	0.0308	0.0344	0.0381	0.0421
	0.0462	0.0505	0.0550	0.0598	0.0650
	0.0708	0.0774	0.0852	0.0944	0.1059
	0.1206	0.1406	0.1659	0.1943	0.2247
	0.2558	0.2877	0.3203	0.3537	0.3880
	0.4230	0.4589	0.4956	0.5331	0.5714
	0.6105	0.6504	0.6912	0.7328	0.7753
	0.8186	0.8627	0.9076	0.9534	1.0000
Hrad:	0.0386	0.0776	0.1130	0.1467	0.1799
	0.2131	0.2459	0.2775	0.3098	0.3419
	0.3732	0.4039	0.4339	0.4594	0.4840
	0.5084	0.5327	0.5527	0.5611	0.5568
	0.5332	0.5014	0.4719	0.4312	0.3836
	0.3347	0.2776	0.2893	0.3067	0.3436
	0.3813	0.4193	0.4558	0.4914	0.5261
	0.5602	0.5945	0.6284	0.6615	0.6942
	0.7259	0.7579	0.7889	0.8196	0.8503
	0.8802	0.9110	0.9416	0.9705	1.0000
Width:	0.0339	0.0388	0.0438	0.0485	0.0527
	0.0564	0.0599	0.0633	0.0665	0.0694
	0.0724	0.0753	0.0783	0.0820	0.0859
	0.0898	0.0937	0.0983	0.1053	0.1153
	0.1314	0.1531	0.1792	0.2177	0.2748
	0.3593	0.5058	0.5730	0.6332	0.6532
	0.6703	0.6856	0.7022	0.7194	0.7371
	0.7548	0.7717	0.7884	0.8056	0.8228
	0.8408	0.8579	0.8759	0.8940	0.9116
	0.9299	0.9469	0.9639	0.9823	1.0000
Transect 2_2					
Area:	0.0171	0.0343	0.0519	0.0696	0.0874
	0.1054	0.1235	0.1418	0.1602	0.1786
	0.1971	0.2158	0.2345	0.2534	0.2725
	0.2916	0.3107	0.3300	0.3494	0.3689
	0.3886	0.4084	0.4282	0.4481	0.4681
	0.4883	0.5086	0.5291	0.5495	0.5701
	0.5908	0.6116	0.6326	0.6536	0.6746
	0.6958	0.7171	0.7384	0.7599	0.7814
	0.8029	0.8246	0.8463	0.8681	0.8899
	0.9118	0.9338	0.9558	0.9779	1.0000
Hrad:	0.0221	0.0435	0.0653	0.0867	0.1080
	0.1294	0.1503	0.1711	0.1927	0.2142
	0.2351	0.2556	0.2756	0.2958	0.3164
	0.3375	0.3585	0.3779	0.3970	0.4165
	0.4363	0.4570	0.4776	0.4967	0.5150
	0.5337	0.5526	0.5730	0.5932	0.6123
	0.6304	0.6480	0.6666	0.6855	0.7077
	0.7250	0.7447	0.7644	0.7841	0.8034
	0.8228	0.8423	0.8615	0.8808	0.9000
	0.9198	0.9399	0.9600	0.9800	1.0000
Width:	0.7727	0.7901	0.7953	0.8025	0.8097
	0.8150	0.8222	0.8288	0.8315	0.8342
	0.8387	0.8442	0.8513	0.8568	0.8612
	0.8640	0.8668	0.8733	0.8802	0.8860
	0.8909	0.8938	0.8967	0.9023	0.9091
	0.9150	0.9205	0.9235	0.9265	0.9312
	0.9373	0.9440	0.9490	0.9494	0.9534
	0.9598	0.9629	0.9661	0.9692	0.9727
	0.9758	0.9790	0.9824	0.9856	0.9888
	0.9914	0.9935	0.9957	0.9978	1.0000
Transect 2_20					
Area:	0.0009	0.0024	0.0043	0.0065	0.0089
	0.0116	0.0144	0.0174	0.0206	0.0240
	0.0275	0.0312	0.0351	0.0392	0.0434
	0.0478	0.0523	0.0570	0.0619	0.0669
	0.0722	0.0777	0.0834	0.0895	0.0960
	0.1033	0.1116	0.1233	0.1387	0.1573
	0.1813	0.2095	0.2411	0.2752	0.3098
	0.3451	0.3809	0.4177	0.4558	0.4954
	0.5369	0.5805	0.6273	0.6775	0.7290
	0.7816	0.8350	0.8892	0.9442	1.0000
Hrad:	0.0384	0.0778	0.1158	0.1538	0.1963
	0.2367	0.2763	0.3144	0.3507	0.3867
	0.4218	0.4574	0.4929	0.5277	0.5637
	0.5986	0.6310	0.6631	0.6941	0.7210
	0.7480	0.7730	0.7928	0.7903	0.7813
	0.7490	0.6648	0.5197	0.4589	0.4255

	0.3882	0.3913	0.4066	0.4486	0.4976
	0.5449	0.5899	0.6277	0.6594	0.6863
	0.7098	0.7228	0.7248	0.7462	0.7841
	0.8285	0.8714	0.9139	0.9565	1.0000
Width:					
	0.0226	0.0304	0.0367	0.0420	0.0454
	0.0487	0.0519	0.0551	0.0584	0.0616
	0.0648	0.0679	0.0708	0.0737	0.0764
	0.0792	0.0822	0.0852	0.0884	0.0920
	0.0957	0.0996	0.1043	0.1123	0.1220
	0.1370	0.1671	0.2365	0.3015	0.3691
	0.4664	0.5349	0.5926	0.6130	0.6222
	0.6329	0.6454	0.6651	0.6908	0.7216
	0.7561	0.8030	0.8654	0.9079	0.9297
	0.9434	0.9582	0.9729	0.9872	1.0000
Transect 2_21					
Area:					
	0.0025	0.0053	0.0085	0.0119	0.0155
	0.0192	0.0231	0.0271	0.0313	0.0356
	0.0401	0.0447	0.0494	0.0543	0.0592
	0.0643	0.0695	0.0748	0.0802	0.0858
	0.0915	0.0980	0.1071	0.1188	0.1333
	0.1506	0.1707	0.1955	0.2258	0.2566
	0.2874	0.3183	0.3494	0.3809	0.4128
	0.4453	0.4783	0.5118	0.5458	0.5806
	0.6161	0.6523	0.6895	0.7278	0.7674
	0.8085	0.8516	0.8972	0.9465	1.0000
Hrad:					
	0.0523	0.0989	0.1455	0.1917	0.2372
	0.2833	0.3281	0.3715	0.4139	0.4553
	0.4963	0.5364	0.5758	0.6172	0.6583
	0.6987	0.7386	0.7779	0.8145	0.8504
	0.8858	0.9117	0.9118	0.8944	0.8623
	0.8191	0.7813	0.6457	0.4144	0.4690
	0.5235	0.5779	0.6290	0.6757	0.7212
	0.7638	0.8108	0.8535	0.8924	0.9316
	0.9661	1.0018	1.0292	1.0531	1.0714
	1.0886	1.0838	1.0673	1.0400	1.0000
Width:					
	0.0473	0.0538	0.0584	0.0620	0.0652
	0.0677	0.0702	0.0728	0.0753	0.0778
	0.0803	0.0828	0.0852	0.0873	0.0892
	0.0912	0.0932	0.0952	0.0974	0.0997
	0.1029	0.1358	0.1844	0.2328	0.2811
	0.3313	0.3837	0.5053	0.5442	0.5461

	0.5480	0.5500	0.5546	0.5627	0.5715
	0.5822	0.5891	0.5987	0.6108	0.6224
	0.6369	0.6504	0.6692	0.6904	0.7156
	0.7422	0.7853	0.8403	0.9100	1.0000
Transect 2_22					
Area:					
	0.0007	0.0018	0.0031	0.0048	0.0066
	0.0087	0.0110	0.0138	0.0210	0.0370
	0.0545	0.0721	0.0899	0.1079	0.1260
	0.1443	0.1630	0.1820	0.2013	0.2209
	0.2410	0.2615	0.2823	0.3036	0.3251
	0.3469	0.3692	0.3919	0.4149	0.4385
	0.4625	0.4870	0.5119	0.5373	0.5632
	0.5896	0.6164	0.6435	0.6710	0.6990
	0.7273	0.7561	0.7852	0.8148	0.8447
	0.8750	0.9057	0.9368	0.9682	1.0000
Hrad:					
	0.0235	0.0453	0.0667	0.0872	0.1075
	0.1260	0.1431	0.1012	0.0771	0.0676
	0.0988	0.1299	0.1607	0.1910	0.2208
	0.2486	0.2764	0.3027	0.3300	0.3539
	0.3787	0.4042	0.4286	0.4533	0.4787
	0.5011	0.5250	0.5465	0.5683	0.5881
	0.6086	0.6281	0.6487	0.6688	0.6901
	0.7071	0.7283	0.7517	0.7719	0.7918
	0.8121	0.8347	0.8529	0.8744	0.8940
	0.9152	0.9360	0.9569	0.9765	1.0000
Width:					
	0.0289	0.0388	0.0469	0.0543	0.0612
	0.0685	0.0764	0.1359	0.3619	0.5471
	0.5514	0.5553	0.5594	0.5645	0.5704
	0.5805	0.5896	0.6011	0.6099	0.6241
	0.6365	0.6469	0.6587	0.6696	0.6789
	0.6923	0.7032	0.7170	0.7300	0.7456
	0.7598	0.7753	0.7892	0.8034	0.8161
	0.8338	0.8463	0.8561	0.8693	0.8827
	0.8956	0.9058	0.9206	0.9318	0.9449
	0.9561	0.9676	0.9790	0.9916	1.0000
Transect 2_23					
Area:					
	0.0003	0.0009	0.0017	0.0027	0.0038
	0.0050	0.0063	0.0078	0.0097	0.0123
	0.0155	0.0201	0.0362	0.0542	0.0725
	0.0912	0.1103	0.1300	0.1501	0.1708

Hrad:	0.1920	0.2137	0.2359	0.2586	0.2817
	0.3056	0.3298	0.3545	0.3798	0.4056
	0.4320	0.4588	0.4861	0.5139	0.5420
	0.5706	0.5995	0.6286	0.6581	0.6878
	0.7178	0.7480	0.7784	0.8092	0.8403
	0.8716	0.9033	0.9352	0.9675	1.0000
Width:	0.0185	0.0402	0.0643	0.0863	0.1069
	0.1261	0.1443	0.1542	0.1409	0.1393
	0.1422	0.1191	0.0661	0.0976	0.1281
	0.1585	0.1859	0.2136	0.2401	0.2671
	0.2922	0.3186	0.3436	0.3694	0.3926
	0.4165	0.4403	0.4640	0.4856	0.5094
	0.5304	0.5551	0.5769	0.6013	0.6251
	0.6489	0.6764	0.7022	0.7274	0.7536
	0.7805	0.8064	0.8315	0.8553	0.8808
	0.9066	0.9289	0.9525	0.9780	1.0000
Hrad:	0.0158	0.0230	0.0270	0.0309	0.0346
	0.0390	0.0432	0.0500	0.0685	0.0875
	0.1081	0.3038	0.5472	0.5552	0.5661
	0.5754	0.5931	0.6083	0.6251	0.6394
	0.6571	0.6707	0.6866	0.7001	0.7175
	0.7335	0.7488	0.7641	0.7821	0.7963
	0.8144	0.8265	0.8426	0.8547	0.8671
	0.8794	0.8863	0.8952	0.9047	0.9127
	0.9197	0.9275	0.9362	0.9461	0.9540
	0.9614	0.9724	0.9819	0.9892	1.0000
Transect 2_24					
Area:	0.0003	0.0010	0.0019	0.0029	0.0041
	0.0055	0.0070	0.0086	0.0103	0.0122
	0.0143	0.0164	0.0187	0.0211	0.0238
	0.0266	0.0297	0.0333	0.0377	0.0456
	0.0663	0.0897	0.1133	0.1369	0.1607
	0.1847	0.2088	0.2330	0.2575	0.2823
	0.3073	0.3334	0.3612	0.3905	0.4217
	0.4546	0.4886	0.5237	0.5596	0.5966
	0.6346	0.6734	0.7126	0.7523	0.7925
Hrad:	0.8331	0.8742	0.9157	0.9576	1.0000
Width:	0.0229	0.0535	0.0800	0.1089	0.1362
	0.1621	0.1869	0.2106	0.2336	0.2575
	0.2810	0.3041	0.3269	0.3441	0.3584
	0.3736	0.3726	0.3539	0.2986	0.2441
Width:	0.1209	0.1626	0.2041	0.2453	0.2862
	0.3269	0.3670	0.4063	0.4450	0.4826
	0.5193	0.5533	0.5840	0.6121	0.5593
	0.5774	0.6018	0.6275	0.6535	0.6777
	0.7031	0.7351	0.7689	0.8010	0.8363
	0.8684	0.9009	0.9354	0.9674	1.0000
Hrad:	0.0136	0.0184	0.0232	0.0266	0.0298
	0.0331	0.0363	0.0396	0.0430	0.0461
	0.0492	0.0523	0.0554	0.0594	0.0642
	0.0690	0.0774	0.0916	0.1240	0.3187
	0.5478	0.5508	0.5539	0.5571	0.5604
	0.5638	0.5678	0.5725	0.5776	0.5837
	0.5933	0.6339	0.6695	0.7071	0.7533
	0.7866	0.8114	0.8341	0.8560	0.8801
	0.9023	0.9158	0.9266	0.9391	0.9475
	0.9593	0.9703	0.9789	0.9898	1.0000
Transect 2_25					
Area:	0.0001	0.0006	0.0013	0.0023	0.0033
	0.0045	0.0059	0.0073	0.0089	0.0106
	0.0124	0.0143	0.0164	0.0186	0.0210
	0.0235	0.0262	0.0290	0.0321	0.0355
	0.0443	0.0593	0.0796	0.1048	0.1302
	0.1556	0.1811	0.2068	0.2326	0.2587
	0.2851	0.3118	0.3388	0.3661	0.3955
	0.4272	0.4604	0.4949	0.5306	0.5679
	0.6067	0.6465	0.6880	0.7311	0.7748
Hrad:	0.8190	0.8637	0.9088	0.9542	1.0000

	0.2712	0.3796	0.5492	0.5510	0.5529
	0.5547	0.5575	0.5610	0.5646	0.5707
	0.5779	0.5849	0.5909	0.6117	0.6645
	0.7097	0.7384	0.7652	0.7928	0.8321
	0.8552	0.8775	0.9309	0.9445	0.9593
	0.9678	0.9769	0.9860	0.9936	1.0000

Transect 2_26

Area:	0.0005	0.0016	0.0029	0.0044	0.0060
	0.0079	0.0099	0.0121	0.0144	0.0168
	0.0194	0.0221	0.0249	0.0278	0.0309
	0.0342	0.0375	0.0410	0.0446	0.0484
	0.0524	0.0565	0.0607	0.0652	0.0702
	0.0764	0.0865	0.1080	0.1395	0.1710
	0.2028	0.2346	0.2666	0.2988	0.3311
	0.3637	0.3965	0.4295	0.4635	0.5008
	0.5412	0.5848	0.6307	0.6788	0.7290
	0.7817	0.8355	0.8900	0.9448	1.0000

Hrad:	0.0304	0.0709	0.1124	0.1503	0.1858
	0.2209	0.2585	0.2946	0.3295	0.3635
	0.3965	0.4289	0.4621	0.4934	0.5243
	0.5548	0.5849	0.6147	0.6442	0.6702
	0.6942	0.7185	0.7393	0.7563	0.6789
	0.6000	0.3380	0.1902	0.2447	0.2990
	0.3530	0.4068	0.4598	0.5122	0.5643
	0.6157	0.6666	0.7153	0.7594	0.7996
	0.8334	0.7234	0.7442	0.7661	0.7865
	0.8111	0.8552	0.9038	0.9527	1.0000

Width:	0.0160	0.0218	0.0252	0.0286	0.0320
	0.0352	0.0376	0.0401	0.0425	0.0450
	0.0474	0.0499	0.0521	0.0545	0.0570
	0.0594	0.0618	0.0642	0.0667	0.0695
	0.0725	0.0755	0.0790	0.0830	0.1002
	0.1242	0.2532	0.5662	0.5685	0.5707
	0.5729	0.5752	0.5783	0.5818	0.5852
	0.5892	0.5933	0.5989	0.6458	0.7000
	0.7575	0.8076	0.8469	0.8855	0.9267
	0.9636	0.9769	0.9847	0.9916	1.0000

Transect 2_27

Area:	0.0023	0.0055	0.0095	0.0141	0.0194
	0.0256	0.0323	0.0399	0.0482	0.0573

	0.0671	0.0778	0.0893	0.1015	0.1145
	0.1283	0.1428	0.1582	0.1744	0.1915
	0.2093	0.2279	0.2474	0.2677	0.2887
	0.3107	0.3334	0.3568	0.3811	0.4062
	0.4320	0.4586	0.4859	0.5137	0.5417
	0.5700	0.5987	0.6277	0.6570	0.6866
	0.7166	0.7469	0.7775	0.8085	0.8397
	0.8712	0.9030	0.9351	0.9674	1.0000

Hrad:	0.0272	0.0507	0.0724	0.0930	0.1099
	0.1304	0.1472	0.1647	0.1815	0.1989
	0.2134	0.2297	0.2454	0.2644	0.2795
	0.2963	0.3131	0.3274	0.3434	0.3579
	0.3766	0.3914	0.4078	0.4227	0.4400
	0.4537	0.4728	0.4885	0.5059	0.5207
	0.5403	0.5551	0.5760	0.6019	0.6292
	0.6541	0.6789	0.7051	0.7281	0.7527
	0.7792	0.8012	0.8252	0.8509	0.8758
	0.8998	0.9231	0.9496	0.9763	1.0000

Width:	0.0861	0.1093	0.1309	0.1514	0.1768
	0.1961	0.2196	0.2423	0.2656	0.2880
	0.3144	0.3387	0.3639	0.3840	0.4096
	0.4330	0.4562	0.4831	0.5079	0.5350
	0.5559	0.5824	0.6066	0.6332	0.6562
	0.6847	0.7051	0.7305	0.7533	0.7801
	0.7995	0.8261	0.8435	0.8535	0.8609
	0.8715	0.8819	0.8902	0.9023	0.9122
	0.9197	0.9322	0.9423	0.9502	0.9588
	0.9683	0.9782	0.9847	0.9909	1.0000

Transect 2_28

Area:	0.0002	0.0008	0.0018	0.0030	0.0045
	0.0062	0.0081	0.0101	0.0124	0.0148
	0.0175	0.0203	0.0233	0.0266	0.0300
	0.0336	0.0375	0.0417	0.0463	0.0516
	0.0579	0.0651	0.0734	0.0832	0.0949
	0.1082	0.1233	0.1402	0.1591	0.1798
	0.2024	0.2270	0.2534	0.2818	0.3121
	0.3444	0.3786	0.4148	0.4529	0.4930
	0.5350	0.5791	0.6251	0.6730	0.7229
	0.7748	0.8286	0.8844	0.9416	1.0000

Hrad:	0.0293	0.0585	0.0910	0.1291	0.1675
	0.2038	0.2385	0.2722	0.3050	0.3373

	0.3695	0.4012	0.4325	0.4636	0.4924
	0.5162	0.5348	0.5525	0.5478	0.5197
	0.5028	0.4916	0.4775	0.4527	0.4436
	0.4472	0.4532	0.4568	0.4712	0.4877
	0.5026	0.5217	0.5447	0.5637	0.5852
	0.6083	0.6314	0.6555	0.6807	0.7052
	0.7306	0.7550	0.7825	0.8089	0.8342
	0.8609	0.8898	0.9180	0.9571	1.0000
Width:					
	0.0068	0.0135	0.0194	0.0235	0.0268
	0.0301	0.0334	0.0367	0.0401	0.0434
	0.0466	0.0499	0.0531	0.0564	0.0599
	0.0641	0.0690	0.0744	0.0834	0.0982
	0.1140	0.1312	0.1525	0.1827	0.2129
	0.2410	0.2710	0.3060	0.3368	0.3679
	0.4020	0.4345	0.4646	0.4992	0.5327
	0.5656	0.5991	0.6323	0.6650	0.6988
	0.7321	0.7668	0.7987	0.8319	0.8665
	0.9000	0.9312	0.9634	0.9839	1.0000

Transect 2_29

Area:	0.0006	0.0019	0.0037	0.0058	0.0083
	0.0110	0.0141	0.0176	0.0214	0.0255
	0.0300	0.0347	0.0398	0.0453	0.0513
	0.0577	0.0647	0.0725	0.0812	0.0912
	0.1024	0.1151	0.1292	0.1446	0.1614
	0.1796	0.1991	0.2201	0.2424	0.2662
	0.2916	0.3183	0.3465	0.3763	0.4074
	0.4399	0.4739	0.5093	0.5460	0.5841
	0.6235	0.6634	0.7038	0.7447	0.7863
	0.8283	0.8708	0.9134	0.9562	1.0000
Hrad:					
	0.0252	0.0535	0.0831	0.1124	0.1395
	0.1647	0.1887	0.2122	0.2371	0.2619
	0.2862	0.3101	0.3288	0.3463	0.3629
	0.3782	0.3846	0.3893	0.3822	0.3785
	0.3759	0.3772	0.3854	0.3965	0.4068
	0.4198	0.4330	0.4481	0.4650	0.4774
	0.4927	0.5117	0.5276	0.5449	0.5647
	0.5851	0.6028	0.6237	0.6443	0.6637
	0.6943	0.7292	0.7636	0.7963	0.8306
	0.8648	0.9044	0.9445	0.9764	1.0000
Width:					
	0.0237	0.0357	0.0445	0.0516	0.0589
	0.0667	0.0745	0.0825	0.0897	0.0968

	0.1039	0.1110	0.1200	0.1298	0.1401
	0.1514	0.1671	0.1849	0.2113	0.2397
	0.2714	0.3042	0.3343	0.3639	0.3959
	0.4269	0.4591	0.4905	0.5207	0.5570
	0.5913	0.6217	0.6564	0.6902	0.7213
	0.7518	0.7860	0.8165	0.8474	0.8801
	0.8980	0.9097	0.9216	0.9353	0.9466
	0.9579	0.9628	0.9669	0.9792	1.0000

Transect 2_3

Area:	0.0001	0.0005	0.0011	0.0018	0.0027
	0.0038	0.0050	0.0064	0.0080	0.0098
	0.0120	0.0144	0.0169	0.0198	0.0229
	0.0262	0.0297	0.0334	0.0372	0.0413
	0.0457	0.0511	0.0602	0.0729	0.0893
	0.1104	0.1360	0.1683	0.2044	0.2408
	0.2774	0.3141	0.3508	0.3877	0.4246
	0.4617	0.4989	0.5362	0.5736	0.6111
	0.6487	0.6864	0.7243	0.7624	0.8008
	0.8395	0.8786	0.9181	0.9584	1.0000
Hrad:					
	0.0223	0.0456	0.0730	0.0984	0.1219
	0.1461	0.1698	0.1892	0.2098	0.2225
	0.2320	0.2573	0.2822	0.2946	0.3196
	0.3456	0.3711	0.3929	0.4184	0.4340
	0.4440	0.4526	0.4327	0.4124	0.3634
	0.3237	0.2722	0.2373	0.2523	0.2951
	0.3390	0.3829	0.4266	0.4703	0.5138
	0.5567	0.5998	0.6428	0.6857	0.7280
	0.7706	0.8132	0.8555	0.8971	0.9388
	0.9801	1.0210	1.0604	1.0979	1.0000
Width:					
	0.0056	0.0109	0.0145	0.0182	0.0221
	0.0257	0.0293	0.0337	0.0381	0.0440
	0.0514	0.0556	0.0598	0.0669	0.0714
	0.0756	0.0797	0.0846	0.0887	0.0949
	0.1026	0.1476	0.2515	0.3210	0.4280
	0.5186	0.6470	0.7965	0.8103	0.8163
	0.8184	0.8204	0.8224	0.8245	0.8265
	0.8295	0.8319	0.8342	0.8365	0.8395
	0.8418	0.8442	0.8488	0.8548	0.8604
	0.8683	0.8782	0.8886	0.9121	1.0000

Transect 2_30

Area:

	0.0007	0.0018	0.0034	0.0052	0.0074
	0.0099	0.0128	0.0162	0.0200	0.0242
	0.0289	0.0340	0.0397	0.0459	0.0527
	0.0600	0.0679	0.0764	0.0857	0.0959
	0.1072	0.1194	0.1326	0.1468	0.1622
	0.1789	0.1968	0.2161	0.2367	0.2588
	0.2822	0.3070	0.3333	0.3610	0.3901
	0.4204	0.4521	0.4854	0.5200	0.5561
	0.5937	0.6328	0.6735	0.7158	0.7598
	0.8053	0.8523	0.9006	0.9499	1.0000

Hrad:

	0.0366	0.0684	0.1003	0.1294	0.1560
	0.1813	0.2068	0.2264	0.2469	0.2718
	0.2948	0.3148	0.3341	0.3526	0.3733
	0.3946	0.4154	0.4314	0.4417	0.4488
	0.4579	0.4710	0.4856	0.4996	0.5080
	0.5184	0.5327	0.5443	0.5577	0.5726
	0.5892	0.6022	0.6211	0.6389	0.6617
	0.6826	0.7014	0.7194	0.7409	0.7602
	0.7797	0.7995	0.8183	0.8349	0.8553
	0.8775	0.8990	0.9283	0.9623	1.0000

Width:

	0.0187	0.0268	0.0332	0.0398	0.0469
	0.0542	0.0615	0.0707	0.0802	0.0883
	0.0971	0.1072	0.1179	0.1292	0.1402
	0.1511	0.1624	0.1761	0.1929	0.2126
	0.2329	0.2524	0.2720	0.2928	0.3182
	0.3440	0.3686	0.3961	0.4236	0.4511
	0.4781	0.5090	0.5359	0.5645	0.5889
	0.6153	0.6441	0.6743	0.7014	0.7311
	0.7610	0.7912	0.8228	0.8571	0.8882
	0.9176	0.9480	0.9702	0.9871	1.0000

Transect 2_31

Area:

	0.0004	0.0014	0.0028	0.0046	0.0067
	0.0091	0.0119	0.0149	0.0183	0.0220
	0.0260	0.0303	0.0349	0.0398	0.0450
	0.0505	0.0563	0.0625	0.0692	0.0766
	0.0848	0.0943	0.1049	0.1169	0.1305
	0.1458	0.1627	0.1815	0.2021	0.2245
	0.2489	0.2752	0.3035	0.3335	0.3653
	0.3987	0.4335	0.4698	0.5076	0.5469
	0.5876	0.6296	0.6730	0.7177	0.7634
	0.8097	0.8566	0.9041	0.9520	1.0000

Hrad:

	0.0242	0.0562	0.0864	0.1146	0.1421
	0.1682	0.1952	0.2222	0.2476	0.2727
	0.2986	0.3242	0.3497	0.3760	0.4019
	0.4274	0.4474	0.4677	0.4677	0.4669
	0.4634	0.4485	0.4467	0.4388	0.4355
	0.4347	0.4380	0.4433	0.4528	0.4630
	0.4729	0.4869	0.5013	0.5212	0.5402
	0.5645	0.5881	0.6130	0.6363	0.6601
	0.6858	0.7123	0.7387	0.7647	0.8010
	0.8388	0.8742	0.9132	0.9567	1.0000

Width:

	0.0164	0.0256	0.0329	0.0401	0.0469
	0.0539	0.0605	0.0668	0.0734	0.0800
	0.0863	0.0926	0.0989	0.1048	0.1108
	0.1168	0.1244	0.1321	0.1465	0.1627
	0.1818	0.2091	0.2339	0.2657	0.2992
	0.3350	0.3715	0.4097	0.4468	0.4857
	0.5274	0.5666	0.6070	0.6417	0.6783
	0.7086	0.7397	0.7691	0.8007	0.8315
	0.8600	0.8875	0.9148	0.9423	0.9563
	0.9679	0.9819	0.9915	0.9958	1.0000

Transect 2_32

Area:

	0.0005	0.0019	0.0037	0.0059	0.0083
	0.0111	0.0141	0.0174	0.0209	0.0247
	0.0289	0.0335	0.0386	0.0440	0.0500
	0.0563	0.0633	0.0710	0.0797	0.0895
	0.1008	0.1134	0.1273	0.1427	0.1597
	0.1780	0.1980	0.2195	0.2426	0.2672
	0.2933	0.3208	0.3496	0.3798	0.4115
	0.4447	0.4793	0.5151	0.5518	0.5897
	0.6285	0.6679	0.7078	0.7481	0.7889
	0.8301	0.8718	0.9139	0.9566	1.0000

Hrad:

	0.0212	0.0519	0.0805	0.1113	0.1400
	0.1672	0.1939	0.2202	0.2450	0.2694
	0.2856	0.2998	0.3168	0.3341	0.3519
	0.3692	0.3757	0.3779	0.3745	0.3694
	0.3669	0.3736	0.3792	0.3844	0.3965
	0.4077	0.4155	0.4300	0.4450	0.4605
	0.4792	0.4991	0.5171	0.5392	0.5547
	0.5745	0.5957	0.6227	0.6468	0.6735
	0.7040	0.7361	0.7730	0.8082	0.8419
	0.8776	0.9125	0.9451	0.9731	1.0000

Width:

0.0247	0.0364	0.0457	0.0522	0.0586
0.0650	0.0712	0.0771	0.0834	0.0897
0.0989	0.1092	0.1190	0.1289	0.1389
0.1494	0.1649	0.1841	0.2089	0.2384
0.2705	0.2989	0.3310	0.3663	0.3974
0.4310	0.4707	0.5044	0.5387	0.5737
0.6053	0.6356	0.6688	0.6970	0.7342
0.7661	0.7964	0.8186	0.8445	0.8666
0.8836	0.8981	0.9063	0.9163	0.9275
0.9364	0.9457	0.9572	0.9731	1.0000
Transect 2_33				
Area:				
0.0007	0.0019	0.0034	0.0053	0.0074
0.0098	0.0125	0.0154	0.0184	0.0217
0.0252	0.0291	0.0332	0.0378	0.0428
0.0487	0.0551	0.0622	0.0708	0.0806
0.0914	0.1030	0.1155	0.1290	0.1433
0.1586	0.1750	0.1926	0.2110	0.2308
0.2520	0.2755	0.3032	0.3347	0.3688
0.4036	0.4393	0.4761	0.5135	0.5516
0.5904	0.6301	0.6705	0.7120	0.7545
0.7991	0.8468	0.8965	0.9475	1.0000
Hrad:				
0.0346	0.0636	0.0948	0.1253	0.1540
0.1830	0.2141	0.2441	0.2728	0.3007
0.3218	0.3409	0.3590	0.3747	0.3661
0.3678	0.3884	0.3829	0.3606	0.3651
0.3866	0.4058	0.4249	0.4404	0.4622
0.4746	0.4860	0.5085	0.5258	0.5363
0.5470	0.5529	0.5532	0.4777	0.5096
0.5474	0.5766	0.6128	0.6488	0.6844
0.7200	0.7506	0.7792	0.8107	0.8371
0.8773	0.9139	0.9478	0.9765	1.0000
Width:				
0.0176	0.0258	0.0319	0.0371	0.0424
0.0472	0.0511	0.0550	0.0589	0.0629
0.0683	0.0743	0.0806	0.0878	0.1020
0.1157	0.1241	0.1423	0.1725	0.1941
0.2080	0.2234	0.2393	0.2580	0.2732
0.2946	0.3176	0.3342	0.3543	0.3802
0.4071	0.4818	0.5442	0.6206	0.6411
0.6533	0.6751	0.6884	0.7013	0.7142
0.7267	0.7439	0.7626	0.7784	0.7989
0.8653	0.9087	0.9349	0.9590	1.0000

Transect 2_34				
Area:				
0.0009	0.0025	0.0048	0.0077	0.0112
0.0152	0.0200	0.0258	0.0325	0.0405
0.0497	0.0600	0.0714	0.0842	0.0987
0.1145	0.1313	0.1490	0.1674	0.1867
0.2066	0.2274	0.2490	0.2714	0.2947
0.3184	0.3426	0.3671	0.3919	0.4169
0.4422	0.4677	0.4935	0.5195	0.5458
0.5723	0.5991	0.6263	0.6539	0.6820
0.7106	0.7397	0.7693	0.7994	0.8303
0.8625	0.8959	0.9301	0.9649	1.0000
Hrad:				
0.0233	0.0456	0.0651	0.0860	0.1065
0.1231	0.1333	0.1455	0.1554	0.1651
0.1819	0.1955	0.2094	0.2176	0.2281
0.2484	0.2692	0.2913	0.3136	0.3366
0.3582	0.3782	0.4001	0.4191	0.4424
0.4691	0.4963	0.5253	0.5551	0.5849
0.6143	0.6437	0.6730	0.7015	0.7293
0.7571	0.7837	0.8078	0.8281	0.8477
0.8693	0.8916	0.9109	0.9253	0.9309
0.9267	0.9370	0.9502	0.9738	1.0000
Width:				
0.0380	0.0558	0.0741	0.0900	0.1049
0.1232	0.1498	0.1770	0.2094	0.2455
0.2732	0.3066	0.3408	0.3869	0.4328
0.4612	0.4879	0.5116	0.5340	0.5546
0.5769	0.6014	0.6225	0.6477	0.6661
0.6786	0.6901	0.6988	0.7058	0.7126
0.7197	0.7264	0.7330	0.7403	0.7480
0.7556	0.7641	0.7750	0.7893	0.8043
0.8173	0.8294	0.8443	0.8637	0.8918
0.9307	0.9562	0.9788	0.9908	1.0000
Transect 2_35				
Area:				
0.0003	0.0010	0.0019	0.0029	0.0047
0.0074	0.0107	0.0145	0.0188	0.0237
0.0292	0.0366	0.0490	0.0665	0.0867
0.1076	0.1289	0.1507	0.1730	0.1957
0.2187	0.2420	0.2655	0.2892	0.3130
0.3370	0.3610	0.3851	0.4093	0.4336
0.4581	0.4827	0.5074	0.5323	0.5573
0.5827	0.6083	0.6343	0.6605	0.6874
0.7149	0.7431	0.7720	0.8017	0.8322

	0.8636	0.8958	0.9292	0.9635	1.0000
Hrad:	0.0247	0.0499	0.0744	0.0920	0.0744
	0.0967	0.1148	0.1354	0.1578	0.1757
	0.1931	0.2015	0.1893	0.1280	0.1616
	0.1954	0.2290	0.2624	0.2953	0.3274
	0.3619	0.3962	0.4303	0.4667	0.5030
	0.5391	0.5750	0.6105	0.6460	0.6814
	0.7158	0.7500	0.7843	0.8179	0.8486
	0.8758	0.9029	0.9313	0.9562	0.9682
	0.9823	1.0006	1.0121	1.0195	1.0288
	1.0461	1.0483	1.0524	1.0567	1.0000
Width:	0.0137	0.0199	0.0248	0.0316	0.0636
	0.0767	0.0928	0.1069	0.1192	0.1346
	0.1510	0.2616	0.3853	0.5193	0.5369
	0.5506	0.5631	0.5745	0.5858	0.5976
	0.6044	0.6107	0.6170	0.6197	0.6223
	0.6249	0.6277	0.6306	0.6335	0.6362
	0.6398	0.6434	0.6468	0.6506	0.6565
	0.6651	0.6735	0.6808	0.6905	0.7097
	0.7276	0.7425	0.7626	0.7862	0.8088
	0.8253	0.8544	0.8828	0.9117	1.0000
Transect 2_36					
Area:	0.0005	0.0035	0.0087	0.0142	0.0203
	0.0274	0.0353	0.0438	0.0532	0.0636
	0.0745	0.0864	0.1007	0.1166	0.1335
	0.1508	0.1683	0.1859	0.2036	0.2217
	0.2401	0.2588	0.2778	0.2972	0.3168
	0.3366	0.3565	0.3769	0.3980	0.4200
	0.4426	0.4657	0.4895	0.5149	0.5414
	0.5686	0.5965	0.6248	0.6536	0.6829
	0.7131	0.7436	0.7743	0.8053	0.8367
	0.8685	0.9008	0.9335	0.9666	1.0000
Hrad:	0.0151	0.0244	0.0545	0.0827	0.1065
	0.1218	0.1442	0.1672	0.1856	0.2135
	0.2408	0.2514	0.2396	0.2648	0.2602
	0.2916	0.3229	0.3536	0.3842	0.4077
	0.4371	0.4612	0.4865	0.5107	0.5412
	0.5715	0.5984	0.6089	0.6186	0.6316
	0.6526	0.6703	0.6700	0.6646	0.6745
	0.6938	0.7148	0.7362	0.7576	0.7802
	0.7890	0.8174	0.8454	0.8692	0.8907
	0.9102	0.9325	0.9558	0.9775	1.0000
Width:	0.0299	0.1483	0.1594	0.1722	0.1904
	0.2249	0.2446	0.2661	0.2949	0.3187
	0.3318	0.3837	0.4629	0.4822	0.5130
	0.5171	0.5211	0.5256	0.5300	0.5439
	0.5493	0.5611	0.5710	0.5819	0.5854
	0.5889	0.5957	0.6189	0.6434	0.6650
	0.6782	0.6947	0.7306	0.7747	0.8026
	0.8196	0.8345	0.8487	0.8626	0.8903
	0.9039	0.9097	0.9159	0.9264	0.9394
	0.9543	0.9660	0.9766	0.9888	1.0000
Transect 2_37					
Area:	0.0009	0.0029	0.0067	0.0125	0.0203
	0.0301	0.0418	0.0551	0.0694	0.0845
	0.1007	0.1187	0.1387	0.1611	0.1839
	0.2069	0.2298	0.2527	0.2757	0.2987
	0.3218	0.3448	0.3679	0.3910	0.4141
	0.4372	0.4604	0.4836	0.5068	0.5301
	0.5533	0.5766	0.5999	0.6233	0.6466
	0.6700	0.6934	0.7169	0.7403	0.7638
	0.7873	0.8109	0.8344	0.8580	0.8816
	0.9052	0.9289	0.9526	0.9763	1.0000
Hrad:	0.0134	0.0282	0.0329	0.0432	0.0546
	0.0671	0.0770	0.0952	0.1135	0.1314
	0.1434	0.1537	0.1674	0.1671	0.1907
	0.2142	0.2378	0.2613	0.2847	0.3082
	0.3316	0.3550	0.3784	0.4017	0.4250
	0.4483	0.4715	0.4948	0.5180	0.5412
	0.5643	0.5875	0.6106	0.6337	0.6567
	0.6798	0.7028	0.7258	0.7488	0.7717
	0.7947	0.8176	0.8405	0.8633	0.8861
	0.9090	0.9318	0.9545	0.9773	1.0000
Width:	0.0657	0.1014	0.2036	0.2889	0.3714
	0.4486	0.5429	0.5788	0.6186	0.6559
	0.7190	0.7992	0.8843	0.9637	0.9646
	0.9656	0.9665	0.9675	0.9684	0.9694
	0.9703	0.9713	0.9723	0.9733	0.9744
	0.9754	0.9764	0.9774	0.9785	0.9795
	0.9805	0.9815	0.9826	0.9836	0.9846
	0.9856	0.9867	0.9877	0.9887	0.9897
	0.9908	0.9918	0.9928	0.9938	0.9949

	0.9959	0.9969	0.9979	0.9990	1.0000
Transect 2_38					
Area:	0.0037	0.0080	0.0131	0.0189	0.0254
	0.0327	0.0407	0.0494	0.0588	0.0686
	0.0784	0.0883	0.0981	0.1092	0.1223
	0.1354	0.1486	0.1618	0.1775	0.1939
	0.2104	0.2268	0.2433	0.2604	0.2781
	0.2965	0.3156	0.3355	0.3561	0.3774
	0.3994	0.4221	0.4457	0.4699	0.4948
	0.5204	0.5468	0.5739	0.6017	0.6302
	0.6597	0.6931	0.7271	0.7618	0.7971
	0.8351	0.8754	0.9163	0.9578	1.0000
Hrad:	0.2948	0.5495	0.7797	0.9941	1.1881
	1.3867	1.5791	1.7667	1.9505	2.2566
	2.5744	2.8915	3.2078	2.6983	3.0151
	3.3313	3.6467	3.9613	3.5061	3.8211
	4.1354	4.4491	4.7122	4.8439	4.9778
	5.1138	5.2516	5.3422	5.4882	5.6351
	5.7829	5.8737	6.0283	6.1833	6.3387
	6.4943	6.5875	6.7486	6.9097	7.0708
	6.4481	6.6449	6.8404	7.0346	7.2276
	6.7563	6.9721	7.1862	7.3988	1.0000
Width:	0.0124	0.0146	0.0168	0.0190	0.0214
	0.0236	0.0258	0.0279	0.0301	0.0304
	0.0304	0.0305	0.0306	0.0404	0.0405
	0.0406	0.0407	0.0408	0.0506	0.0507
	0.0508	0.0509	0.0516	0.0537	0.0558
	0.0579	0.0600	0.0627	0.0648	0.0669
	0.0690	0.0718	0.0739	0.0759	0.0780
	0.0801	0.0829	0.0850	0.0870	0.0890
	0.1022	0.1042	0.1062	0.1082	0.1102
	0.1235	0.1255	0.1274	0.1294	1.0000
Transect 2_39					
Area:	0.0001	0.0005	0.0011	0.0028	0.0050
	0.0080	0.0118	0.0161	0.0212	0.0269
	0.0335	0.0407	0.0490	0.0579	0.0676
	0.0782	0.0895	0.1016	0.1147	0.1287
	0.1432	0.1589	0.1753	0.1926	0.2106
	0.2296	0.2490	0.2694	0.2911	0.3136
	0.3369	0.3613	0.3868	0.4135	0.4412
	0.4695	0.4991	0.5297	0.5613	0.5941
	0.6278	0.6632	0.7000	0.7381	0.7774
	0.8182	0.8603	0.9045	0.9511	1.0000
Hrad:	0.0255	0.0509	0.0582	0.0770	0.1001
	0.1150	0.1525	0.1685	0.2009	0.2254
	0.2527	0.2666	0.2943	0.3101	0.3390
	0.3707	0.3897	0.4068	0.4391	0.4581
	0.4940	0.4992	0.5310	0.5579	0.5707
	0.6110	0.6376	0.6559	0.6668	0.6953
	0.7222	0.7348	0.7557	0.7773	0.7992
	0.8355	0.8427	0.8635	0.8801	0.9171
	0.9260	0.9365	0.9569	0.9688	0.9857
	0.9992	1.0133	1.0172	1.0123	1.0000
Width:	0.0050	0.0100	0.0196	0.0369	0.0495
	0.0696	0.0772	0.0957	0.1058	0.1194
	0.1324	0.1527	0.1664	0.1866	0.1996
	0.2108	0.2297	0.2498	0.2612	0.2810
	0.2899	0.3183	0.3302	0.3453	0.3690
	0.3758	0.3906	0.4108	0.4365	0.4510
	0.4665	0.4917	0.5119	0.5319	0.5520
	0.5620	0.5922	0.6135	0.6378	0.6478
	0.6780	0.7082	0.7315	0.7619	0.7887
	0.8189	0.8490	0.8909	0.9396	1.0000
Transect 2_4					
Area:	0.0023	0.0082	0.0161	0.0255	0.0359
	0.0474	0.0608	0.0760	0.0919	0.1081
	0.1247	0.1414	0.1584	0.1758	0.1934
	0.2113	0.2295	0.2479	0.2666	0.2854
	0.3045	0.3237	0.3431	0.3627	0.3826
	0.4027	0.4230	0.4434	0.4642	0.4854
	0.5076	0.5305	0.5539	0.5779	0.6026
	0.6278	0.6532	0.6787	0.7044	0.7302
	0.7562	0.7823	0.8087	0.8353	0.8621
	0.8892	0.9166	0.9443	0.9721	1.0000
Hrad:	0.0159	0.0332	0.0524	0.0727	0.0918
	0.1089	0.1174	0.1356	0.1610	0.1857
	0.2112	0.2359	0.2588	0.2829	0.3059
	0.3292	0.3517	0.3756	0.3994	0.4228
	0.4463	0.4703	0.4934	0.5145	0.5373
	0.5585	0.5816	0.6040	0.6244	0.6324
	0.6440	0.6559	0.6686	0.6865	0.6960

Width:	0.6930	0.7179	0.7426	0.7664	0.7877
	0.8114	0.8351	0.8523	0.8746	0.8943
	0.9126	0.9258	0.9506	0.9753	1.0000
	0.1456	0.2484	0.3109	0.3540	0.3939
	0.4389	0.5221	0.5649	0.5756	0.5870
	0.5948	0.6037	0.6165	0.6255	0.6362
	0.6457	0.6563	0.6637	0.6710	0.6785
	0.6855	0.6914	0.6982	0.7078	0.7148
	0.7236	0.7297	0.7364	0.7488	0.7804
	0.8057	0.8291	0.8515	0.8670	0.8929
Transect 2_40 Area:	0.9079	0.9118	0.9156	0.9207	0.9284
	0.9332	0.9379	0.9498	0.9558	0.9647
	0.9749	0.9906	0.9937	0.9969	1.0000
	0.0003	0.0011	0.0029	0.0053	0.0087
	0.0129	0.0179	0.0237	0.0303	0.0371
	0.0460	0.0550	0.0649	0.0756	0.0871
	0.0994	0.1125	0.1263	0.1410	0.1565
	0.1728	0.1899	0.2078	0.2265	0.2462
	0.2665	0.2877	0.3098	0.3327	0.3563
	0.3807	0.4060	0.4321	0.4590	0.4867
Hrad:	0.5153	0.5446	0.5748	0.6057	0.6375
	0.6700	0.7034	0.7377	0.7727	0.8086
	0.8453	0.8828	0.9211	0.9601	1.0000
	0.0191	0.0376	0.0558	0.0723	0.0916
	0.1127	0.1348	0.1547	0.1719	0.1948
	0.2140	0.2373	0.2520	0.2748	0.2959
	0.3151	0.3371	0.3570	0.3770	0.3970
	0.4169	0.4381	0.4570	0.4757	0.4953
	0.5171	0.5352	0.5548	0.5772	0.5971
	0.6171	0.6368	0.6585	0.6773	0.6960
Width:	0.7160	0.7385	0.7585	0.7785	0.7985
	0.8185	0.8382	0.8579	0.8789	0.8979
	0.9154	0.9407	0.9609	0.9798	1.0000
	0.0134	0.0302	0.0514	0.0734	0.0949
	0.1149	0.1330	0.1531	0.1762	0.1939
	0.2150	0.2318	0.2576	0.2752	0.2945
	0.3154	0.3338	0.3539	0.3741	0.3942
	0.4144	0.4335	0.4547	0.4762	0.4970
	0.5154	0.5376	0.5585	0.5763	0.5967
	0.6170	0.6376	0.6562	0.6777	0.6993
Transect 2_5 Area:	0.7198	0.7375	0.7577	0.7780	0.7983
	0.8185	0.8392	0.8599	0.8792	0.9005
	0.9234	0.9385	0.9586	0.9799	1.0000
	0.0015	0.0047	0.0085	0.0131	0.0188
	0.0254	0.0330	0.0416	0.0511	0.0623
	0.0746	0.0876	0.1018	0.1171	0.1330
	0.1494	0.1664	0.1839	0.2021	0.2208
	0.2399	0.2594	0.2793	0.2996	0.3205
	0.3421	0.3640	0.3864	0.4092	0.4323
	0.4558	0.4797	0.5040	0.5287	0.5538
Hrad:	0.5793	0.6054	0.6322	0.6597	0.6881
	0.7175	0.7474	0.7777	0.8083	0.8392
	0.8704	0.9020	0.9342	0.9669	1.0000
	0.0192	0.0440	0.0672	0.0856	0.1029
	0.1187	0.1373	0.1548	0.1704	0.1748
	0.1965	0.2168	0.2296	0.2508	0.2749
	0.2984	0.3224	0.3434	0.3661	0.3901
	0.4149	0.4393	0.4639	0.4875	0.5015
	0.5252	0.5479	0.5710	0.5952	0.6193
	0.6428	0.6647	0.6856	0.7093	0.7321
Width:	0.7500	0.7647	0.7749	0.7905	0.7908
	0.8048	0.8289	0.8519	0.8758	0.9005
	0.9214	0.9423	0.9566	0.9754	1.0000
	0.0800	0.1067	0.1274	0.1545	0.1837
	0.2154	0.2421	0.2701	0.3096	0.3583
	0.3817	0.4067	0.4460	0.4697	0.4865
	0.5037	0.5191	0.5387	0.5552	0.5691
	0.5815	0.5938	0.6054	0.6179	0.6425
	0.6547	0.6679	0.6803	0.6910	0.7016
	0.7127	0.7252	0.7388	0.7490	0.7601
Transect 2_6 Area:	0.7761	0.7954	0.8197	0.8385	0.8744
	0.8959	0.9055	0.9162	0.9257	0.9342
	0.9465	0.9586	0.9775	0.9919	1.0000
	0.0011	0.0054	0.0123	0.0200	0.0286
	0.0380	0.0481	0.0589	0.0704	0.0826
	0.0953	0.1087	0.1225	0.1367	0.1514
	0.1665	0.1820	0.1979	0.2142	0.2309
	0.2480	0.2656	0.2836	0.3020	0.3200

Hrad:	0.3400	0.3597	0.3798	0.4004	0.4215
	0.4432	0.4655	0.4883	0.5119	0.5363
	0.5616	0.5880	0.6158	0.6451	0.6758
	0.7070	0.7384	0.7699	0.8017	0.8337
	0.8660	0.8988	0.9319	0.9654	1.0000
Width:	0.0189	0.0294	0.0593	0.0871	0.1119
	0.1372	0.1619	0.1857	0.2091	0.2329
	0.2575	0.2821	0.3065	0.3322	0.3580
	0.3836	0.4082	0.4325	0.4566	0.4794
	0.5027	0.5255	0.5479	0.5702	0.5930
	0.6150	0.6360	0.6556	0.6749	0.6918
	0.7075	0.7251	0.7400	0.7483	0.7594
	0.7649	0.7618	0.7595	0.7520	0.7641
	0.7954	0.8250	0.8542	0.8830	0.9118
0.9350	0.9600	0.9827	1.0027	1.0000	
Transect 2_7 Area:	0.0604	0.1839	0.2083	0.2306	0.2561
	0.2774	0.2975	0.3178	0.3374	0.3554
	0.3710	0.3858	0.4002	0.4122	0.4235
	0.4346	0.4462	0.4578	0.4693	0.4819
	0.4936	0.5055	0.5176	0.5296	0.5409
	0.5527	0.5653	0.5790	0.5930	0.6089
	0.6261	0.6416	0.6595	0.6837	0.7059
	0.7339	0.7716	0.8106	0.8578	0.8844
	0.8888	0.8949	0.9012	0.9078	0.9143
0.9261	0.9360	0.9481	0.9627	1.0000	
Hrad:	0.0004	0.0014	0.0030	0.0055	0.0087
	0.0131	0.0184	0.0249	0.0327	0.0429
	0.0542	0.0663	0.0792	0.0932	0.1081
	0.1235	0.1394	0.1561	0.1735	0.1917
	0.2106	0.2305	0.2513	0.2734	0.2967
	0.3207	0.3454	0.3707	0.3965	0.4227
	0.4493	0.4760	0.5028	0.5298	0.5571
	0.5845	0.6120	0.6398	0.6678	0.6960
	0.7244	0.7531	0.7821	0.8114	0.8416
0.8725	0.9038	0.9356	0.9676	1.0000	
Hrad:	0.0205	0.0367	0.0448	0.0624	0.0741
	0.0890	0.0987	0.1128	0.1263	0.1272
	0.1506	0.1725	0.1925	0.2090	0.2320
	0.2568	0.2791	0.2962	0.3197	0.3349
	0.3544	0.3678	0.3849	0.3888	0.4081
Width:	0.4288	0.4490	0.4709	0.4961	0.5214
	0.5490	0.5784	0.6075	0.6349	0.6632
	0.6923	0.7205	0.7453	0.7731	0.7999
	0.8245	0.8477	0.8735	0.8924	0.8978
	0.9093	0.9314	0.9545	0.9763	1.0000
Transect 2_8 Area:	0.0215	0.0373	0.0663	0.0874	0.1178
	0.1469	0.1862	0.2206	0.2669	0.3372
	0.3600	0.3846	0.4116	0.4462	0.4661
	0.4810	0.4997	0.5272	0.5429	0.5725
	0.5945	0.6269	0.6531	0.7035	0.7273
	0.7482	0.7695	0.7876	0.7995	0.8110
	0.8185	0.8230	0.8277	0.8345	0.8400
	0.8442	0.8493	0.8584	0.8637	0.8700
	0.8786	0.8884	0.8954	0.9092	0.9374
0.9595	0.9704	0.9802	0.9912	1.0000	
Hrad:	0.0009	0.0023	0.0041	0.0065	0.0093
	0.0125	0.0160	0.0200	0.0248	0.0308
	0.0379	0.0460	0.0559	0.0677	0.0809
	0.0946	0.1091	0.1246	0.1411	0.1584
	0.1764	0.1950	0.2142	0.2339	0.2543
	0.2757	0.2983	0.3218	0.3462	0.3714
	0.3976	0.4246	0.4524	0.4809	0.5099
	0.5391	0.5686	0.5985	0.6286	0.6590
	0.6897	0.7208	0.7528	0.7857	0.8198
0.8547	0.8903	0.9266	0.9630	1.0000	
Width:	0.0294	0.0556	0.0698	0.0944	0.1170
	0.1370	0.1580	0.1751	0.1843	0.1725
	0.1899	0.1974	0.1814	0.2048	0.2235
	0.2510	0.2735	0.2878	0.3119	0.3350
	0.3595	0.3862	0.4115	0.4361	0.4555
	0.4702	0.4808	0.5020	0.5205	0.5385
	0.5589	0.5790	0.5975	0.6253	0.6537
	0.6849	0.7151	0.7454	0.7749	0.8045
	0.8355	0.8510	0.8656	0.8858	0.8874
0.9050	0.9230	0.9514	0.9822	1.0000	
Width:	0.0313	0.0407	0.0591	0.0689	0.0792
	0.0908	0.1014	0.1144	0.1387	0.1787
	0.1994	0.2329	0.3082	0.3307	0.3617
	0.3770	0.3989	0.4330	0.4525	0.4729
	0.4907	0.5049	0.5204	0.5362	0.5588

0.5862	0.6203	0.6410	0.6651	0.6898
0.7114	0.7333	0.7572	0.7691	0.7799
0.7870	0.7951	0.8028	0.8111	0.8191
0.8254	0.8470	0.8696	0.9008	0.9238
0.9444	0.9646	0.9739	0.9804	1.0000

Transect 2_9

Area:	0.0008	0.0022	0.0040	0.0065	0.0096
	0.0138	0.0186	0.0244	0.0313	0.0393
	0.0485	0.0587	0.0701	0.0823	0.0955
	0.1096	0.1243	0.1396	0.1555	0.1720
	0.1891	0.2071	0.2274	0.2502	0.2742
	0.2991	0.3250	0.3517	0.3790	0.4065
	0.4342	0.4620	0.4900	0.5181	0.5464
	0.5749	0.6035	0.6323	0.6612	0.6903
	0.7196	0.7492	0.7790	0.8092	0.8396
	0.8704	0.9019	0.9340	0.9667	1.0000

Hrad:	0.0224	0.0467	0.0640	0.0777	0.0932
	0.1042	0.1194	0.1304	0.1435	0.1555
	0.1682	0.1838	0.2013	0.2192	0.2371
	0.2576	0.2805	0.3032	0.3252	0.3464
	0.3661	0.3717	0.3545	0.3605	0.3794
	0.3983	0.4185	0.4410	0.4675	0.4985
	0.5293	0.5599	0.5902	0.6200	0.6492
	0.6791	0.7093	0.7390	0.7677	0.7962
	0.8240	0.8488	0.8731	0.8984	0.9234
	0.9396	0.9537	0.9700	0.9799	1.0000

Width:	0.0358	0.0472	0.0634	0.0841	0.1091
	0.1337	0.1576	0.1890	0.2199	0.2549
	0.2908	0.3226	0.3513	0.3790	0.4067
	0.4295	0.4472	0.4647	0.4825	0.5012
	0.5214	0.5624	0.6475	0.7006	0.7297
	0.7581	0.7840	0.8051	0.8182	0.8226
	0.8270	0.8315	0.8361	0.8412	0.8468
	0.8513	0.8553	0.8595	0.8649	0.8702
	0.8761	0.8850	0.8942	0.9023	0.9105
	0.9274	0.9465	0.9634	0.9868	1.0000

Transect 3_1

Area:	0.0020	0.0114	0.0223	0.0338	0.0459
	0.0586	0.0718	0.0855	0.0996	0.1141
	0.1291	0.1445	0.1604	0.1766	0.1933

	0.2104	0.2279	0.2459	0.2642	0.2829
	0.3019	0.3212	0.3409	0.3608	0.3811
	0.4017	0.4226	0.4439	0.4655	0.4874
	0.5096	0.5321	0.5550	0.5782	0.6018
	0.6258	0.6500	0.6747	0.6997	0.7251
	0.7509	0.7771	0.8036	0.8305	0.8578
	0.8855	0.9136	0.9421	0.9710	1.0000

Hrad:	0.0111	0.0322	0.0586	0.0840	0.1090
	0.1327	0.1564	0.1809	0.2042	0.2273
	0.2494	0.2710	0.2931	0.3140	0.3353
	0.3558	0.3762	0.3972	0.4178	0.4395
	0.4604	0.4827	0.5036	0.5243	0.5452
	0.5650	0.5850	0.6054	0.6255	0.6452
	0.6647	0.6833	0.7033	0.7208	0.7383
	0.7575	0.7752	0.7914	0.8092	0.8264
	0.8432	0.8599	0.8771	0.8930	0.9082
	0.9242	0.9405	0.9559	0.9768	1.0000

Width:	0.1935	0.3581	0.3837	0.4062	0.4253
	0.4457	0.4633	0.4767	0.4917	0.5061
	0.5215	0.5371	0.5508	0.5662	0.5801
	0.5949	0.6093	0.6225	0.6357	0.6468
	0.6588	0.6684	0.6797	0.6909	0.7016
	0.7134	0.7248	0.7355	0.7463	0.7573
	0.7685	0.7805	0.7908	0.8038	0.8167
	0.8274	0.8398	0.8537	0.8659	0.8785
	0.8914	0.9045	0.9169	0.9307	0.9451
	0.9586	0.9719	0.9859	0.9942	1.0000

Transect 3_2

Area:	0.0005	0.0021	0.0043	0.0071	0.0105
	0.0143	0.0187	0.0237	0.0290	0.0350
	0.0425	0.0540	0.0698	0.0890	0.1085
	0.1281	0.1479	0.1678	0.1879	0.2082
	0.2288	0.2495	0.2704	0.2915	0.3129
	0.3345	0.3564	0.3788	0.4016	0.4250
	0.4490	0.4734	0.4982	0.5234	0.5490
	0.5751	0.6017	0.6289	0.6567	0.6851
	0.7142	0.7440	0.7744	0.8053	0.8368
	0.8689	0.9015	0.9342	0.9670	1.0000

Hrad:	0.0142	0.0361	0.0555	0.0758	0.0968
	0.1178	0.1325	0.1518	0.1699	0.1856
	0.1934	0.1933	0.1833	0.1518	0.1838

	0.2155	0.2469	0.2781	0.3082	0.3374
	0.3670	0.3969	0.4264	0.4540	0.4820
	0.5090	0.5324	0.5550	0.5761	0.5919
	0.6133	0.6358	0.6581	0.6812	0.7038
	0.7210	0.7390	0.7550	0.7739	0.7879
	0.8000	0.8162	0.8343	0.8520	0.8689
	0.8860	0.9117	0.9411	0.9706	1.0000
Width:					
	0.0351	0.0582	0.0779	0.0945	0.1093
	0.1222	0.1418	0.1566	0.1717	0.1898
	0.2871	0.4104	0.5427	0.5887	0.5925
	0.5966	0.6012	0.6055	0.6117	0.6191
	0.6251	0.6302	0.6357	0.6436	0.6505
	0.6585	0.6707	0.6837	0.6983	0.7192
	0.7332	0.7456	0.7580	0.7693	0.7809
	0.7984	0.8149	0.8337	0.8492	0.8702
	0.8933	0.9121	0.9287	0.9457	0.9635
	0.9812	0.9891	0.9929	0.9964	1.0000
Transect 3_3					
Area:					
	0.0012	0.0049	0.0101	0.0162	0.0228
	0.0302	0.0382	0.0471	0.0566	0.0669
	0.0778	0.0894	0.1016	0.1144	0.1280
	0.1422	0.1572	0.1728	0.1891	0.2061
	0.2237	0.2419	0.2608	0.2804	0.3007
	0.3215	0.3428	0.3647	0.3871	0.4101
	0.4336	0.4576	0.4823	0.5076	0.5336
	0.5601	0.5874	0.6153	0.6438	0.6729
	0.7025	0.7328	0.7637	0.7953	0.8274
	0.8603	0.8939	0.9284	0.9637	1.0000
Hrad:					
	0.0206	0.0385	0.0646	0.0945	0.1203
	0.1471	0.1674	0.1903	0.2149	0.2340
	0.2576	0.2792	0.3030	0.3225	0.3413
	0.3617	0.3818	0.4033	0.4232	0.4437
	0.4646	0.4847	0.5054	0.5221	0.5438
	0.5681	0.5897	0.6125	0.6350	0.6561
	0.6790	0.6996	0.7169	0.7346	0.7565
	0.7769	0.7905	0.8133	0.8325	0.8517
	0.8714	0.8912	0.9099	0.9288	0.9493
	0.9623	0.9753	0.9925	1.0011	1.0000
Width:					
	0.0571	0.1268	0.1557	0.1710	0.1899
	0.2052	0.2283	0.2476	0.2636	0.2857
	0.3020	0.3201	0.3353	0.3546	0.3749

	0.3932	0.4117	0.4286	0.4469	0.4645
	0.4814	0.4992	0.5160	0.5370	0.5529
	0.5658	0.5813	0.5955	0.6096	0.6250
	0.6386	0.6541	0.6728	0.6910	0.7054
	0.7209	0.7432	0.7566	0.7733	0.7900
	0.8063	0.8223	0.8394	0.8563	0.8716
	0.8940	0.9165	0.9354	0.9626	1.0000
Transect 3_4					
Area:					
	0.0047	0.0139	0.0255	0.0377	0.0507
	0.0643	0.0785	0.0931	0.1081	0.1236
	0.1393	0.1555	0.1720	0.1888	0.2060
	0.2235	0.2414	0.2596	0.2782	0.2971
	0.3163	0.3359	0.3558	0.3760	0.3965
	0.4174	0.4385	0.4599	0.4815	0.5033
	0.5254	0.5477	0.5703	0.5930	0.6161
	0.6395	0.6632	0.6873	0.7115	0.7360
	0.7608	0.7858	0.8113	0.8371	0.8632
	0.8897	0.9167	0.9441	0.9718	1.0000
Hrad:					
	0.0171	0.0356	0.0607	0.0846	0.1083
	0.1311	0.1543	0.1781	0.2001	0.2239
	0.2480	0.2692	0.2923	0.3144	0.3371
	0.3573	0.3790	0.4004	0.4209	0.4419
	0.4612	0.4813	0.5025	0.5238	0.5430
	0.5633	0.5848	0.6057	0.6275	0.6491
	0.6699	0.6921	0.7144	0.7332	0.7508
	0.7678	0.7868	0.8061	0.8267	0.8473
	0.8654	0.8826	0.8972	0.9101	0.9296
	0.9435	0.9541	0.9690	0.9838	1.0000
Width:					
	0.2779	0.3918	0.4201	0.4456	0.4682
	0.4906	0.5086	0.5224	0.5403	0.5519
	0.5618	0.5776	0.5885	0.6006	0.6112
	0.6257	0.6371	0.6484	0.6610	0.6723
	0.6859	0.6979	0.7082	0.7180	0.7303
	0.7410	0.7498	0.7593	0.7674	0.7754
	0.7843	0.7915	0.7982	0.8088	0.8206
	0.8329	0.8429	0.8526	0.8607	0.8687
	0.8791	0.8903	0.9042	0.9197	0.9286
	0.9430	0.9607	0.9743	0.9878	1.0000
Transect 3_5					
Area:					
	0.0022	0.0066	0.0124	0.0195	0.0278

	0.0372	0.0474	0.0586	0.0705	0.0831
	0.0965	0.1104	0.1251	0.1403	0.1562
	0.1728	0.1899	0.2076	0.2261	0.2452
	0.2648	0.2852	0.3061	0.3274	0.3490
	0.3710	0.3933	0.4159	0.4389	0.4622
	0.4859	0.5098	0.5342	0.5589	0.5839
	0.6092	0.6349	0.6610	0.6874	0.7142
	0.7412	0.7687	0.7965	0.8246	0.8531
	0.8819	0.9111	0.9405	0.9702	1.0000
Hrad:					
	0.0193	0.0392	0.0564	0.0751	0.0945
	0.1136	0.1326	0.1516	0.1724	0.1916
	0.2122	0.2319	0.2506	0.2708	0.2881
	0.3071	0.3269	0.3439	0.3611	0.3796
	0.3975	0.4130	0.4347	0.4572	0.4804
	0.5026	0.5245	0.5467	0.5672	0.5897
	0.6109	0.6322	0.6519	0.6732	0.6944
	0.7136	0.7336	0.7538	0.7725	0.7934
	0.8137	0.8317	0.8515	0.8713	0.8889
	0.9095	0.9286	0.9491	0.9746	1.0000
Width:					
	0.1120	0.1686	0.2205	0.2609	0.2954
	0.3287	0.3590	0.3883	0.4108	0.4359
	0.4567	0.4783	0.5014	0.5204	0.5445
	0.5650	0.5835	0.6064	0.6289	0.6487
	0.6692	0.6937	0.7072	0.7189	0.7292
	0.7408	0.7523	0.7632	0.7761	0.7860
	0.7974	0.8085	0.8213	0.8320	0.8425
	0.8553	0.8670	0.8782	0.8911	0.9013
	0.9120	0.9252	0.9362	0.9471	0.9603
	0.9702	0.9815	0.9913	0.9956	1.0000
Transect 3_6					
Area:					
	0.0025	0.0071	0.0130	0.0202	0.0288
	0.0386	0.0495	0.0616	0.0748	0.0891
	0.1045	0.1210	0.1386	0.1571	0.1763
	0.1959	0.2159	0.2361	0.2566	0.2773
	0.2983	0.3196	0.3412	0.3631	0.3852
	0.4076	0.4301	0.4530	0.4760	0.4992
	0.5226	0.5462	0.5700	0.5939	0.6181
	0.6424	0.6669	0.6915	0.7163	0.7413
	0.7664	0.7916	0.8170	0.8425	0.8683
	0.8942	0.9204	0.9468	0.9733	1.0000
Hrad:					
	0.0182	0.0360	0.0527	0.0677	0.0840

	0.0991	0.1154	0.1303	0.1459	0.1610
	0.1757	0.1898	0.2056	0.2222	0.2425
	0.2649	0.2875	0.3106	0.3333	0.3559
	0.3776	0.3985	0.4192	0.4417	0.4639
	0.4854	0.5076	0.5276	0.5505	0.5730
	0.5951	0.6171	0.6392	0.6612	0.6816
	0.7040	0.7267	0.7482	0.7699	0.7925
	0.8149	0.8370	0.8586	0.8792	0.8987
	0.9174	0.9369	0.9577	0.9789	1.0000
Width:					
	0.1400	0.1964	0.2461	0.2991	0.3426
	0.3892	0.4289	0.4731	0.5130	0.5537
	0.5949	0.6376	0.6741	0.7072	0.7273
	0.7398	0.7510	0.7602	0.7700	0.7791
	0.7901	0.8021	0.8140	0.8221	0.8305
	0.8397	0.8475	0.8585	0.8646	0.8712
	0.8782	0.8851	0.8918	0.8983	0.9068
	0.9125	0.9177	0.9243	0.9304	0.9354
	0.9405	0.9457	0.9516	0.9583	0.9661
	0.9747	0.9824	0.9886	0.9944	1.0000
Transect 5_1					
Area:					
	0.0033	0.0096	0.0176	0.0269	0.0373
	0.0488	0.0612	0.0745	0.0888	0.1041
	0.1203	0.1374	0.1555	0.1742	0.1933
	0.2126	0.2322	0.2520	0.2720	0.2923
	0.3127	0.3335	0.3544	0.3756	0.3970
	0.4186	0.4405	0.4625	0.4848	0.5073
	0.5300	0.5529	0.5760	0.5993	0.6229
	0.6466	0.6706	0.6947	0.7191	0.7436
	0.7684	0.7934	0.8185	0.8439	0.8694
	0.8951	0.9211	0.9472	0.9735	1.0000
Hrad:					
	0.0169	0.0353	0.0539	0.0727	0.0908
	0.1084	0.1262	0.1430	0.1599	0.1760
	0.1916	0.2077	0.2238	0.2443	0.2675
	0.2905	0.3133	0.3363	0.3590	0.3816
	0.4032	0.4253	0.4473	0.4690	0.4904
	0.5119	0.5333	0.5547	0.5759	0.5969
	0.6175	0.6384	0.6592	0.6799	0.7009
	0.7200	0.7404	0.7611	0.7819	0.8015
	0.8211	0.8412	0.8616	0.8816	0.9014
	0.9211	0.9403	0.9601	0.9800	1.0000
Width:					
	0.1981	0.2731	0.3272	0.3704	0.4110

0.4498	0.4850	0.5214	0.5555	0.5915
0.6280	0.6619	0.6947	0.7132	0.7226
0.7320	0.7411	0.7494	0.7578	0.7660
0.7758	0.7842	0.7924	0.8009	0.8096
0.8178	0.8260	0.8340	0.8419	0.8499
0.8583	0.8660	0.8739	0.8815	0.8887
0.8981	0.9058	0.9129	0.9198	0.9278
0.9359	0.9432	0.9501	0.9573	0.9645
0.9718	0.9795	0.9866	0.9934	1.0000

Transect 5_2

Area:

0.0008	0.0029	0.0117	0.0240	0.0374
0.0514	0.0659	0.0811	0.0971	0.1138
0.1312	0.1490	0.1671	0.1857	0.2045
0.2237	0.2431	0.2628	0.2827	0.3029
0.3233	0.3439	0.3648	0.3858	0.4071
0.4285	0.4501	0.4719	0.4938	0.5159
0.5382	0.5607	0.5834	0.6063	0.6294
0.6527	0.6763	0.7000	0.7239	0.7480
0.7723	0.7968	0.8216	0.8465	0.8716
0.8969	0.9225	0.9482	0.9740	1.0000

Hrad:

0.0121	0.0285	0.0260	0.0488	0.0710
0.0941	0.1157	0.1356	0.1539	0.1729
0.1939	0.2160	0.2368	0.2584	0.2800
0.3011	0.3230	0.3449	0.3668	0.3883
0.4099	0.4313	0.4532	0.4740	0.4956
0.5176	0.5402	0.5626	0.5836	0.6042
0.6246	0.6450	0.6652	0.6852	0.7052
0.7250	0.7447	0.7643	0.7838	0.8032
0.8225	0.8417	0.8607	0.8797	0.8986
0.9174	0.9361	0.9557	0.9779	1.0000

Width:

0.0621	0.1004	0.4517	0.4932	0.5273
0.5462	0.5699	0.5985	0.6310	0.6585
0.6769	0.6900	0.7060	0.7186	0.7306
0.7430	0.7529	0.7620	0.7709	0.7802
0.7889	0.7975	0.8050	0.8141	0.8216
0.8281	0.8335	0.8389	0.8463	0.8540
0.8618	0.8695	0.8772	0.8850	0.8927
0.9005	0.9082	0.9160	0.9237	0.9314
0.9392	0.9469	0.9547	0.9624	0.9702
0.9779	0.9856	0.9923	0.9961	1.0000

NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.

***** Analysis Options

Flow Units CMS

Process Models:

Rainfall/Runoff YES
RDII NO
Snowmelt NO
Groundwater YES
Flow Routing YES
Ponding Allowed NO
Water Quality NO
Infiltration Method GREEN_AMPT
Flow Routing Method DYNWAVE
Starting Date 09/05/2014 00:00:00
Ending Date 09/06/2014 00:00:00
Antecedent Dry Days 0.0
Report Time Step 00:00:05
Wet Time Step 00:00:05
Dry Time Step 00:00:05
Routing Time Step 5.00 sec
Variable Time Step YES
Maximum Trials 8
Number of Threads 1
Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	13.962	133.602
Evaporation Loss	0.000	0.000
Infiltration Loss	13.825	132.284
Surface Runoff	0.135	1.296
Final Storage	0.002	0.021
Continuity Error (%)	0.000	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr


```

*****
Dry Weather Inflow ..... 0.000 0.000
Wet Weather Inflow ..... 0.135 1.355
Groundwater Inflow ..... 0.000 0.000
RDII Inflow ..... 0.000 0.000
External Inflow ..... 0.000 0.000
External Outflow ..... 0.135 1.355
Flooding Loss ..... 0.000 0.000
Evaporation Loss ..... 0.000 0.000
Exfiltration Loss ..... 0.000 0.000
Initial Stored Volume .... 0.000 0.000
Final Stored Volume ..... 0.000 0.000
Continuity Error (%) ..... 0.000

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*****
Time-Step Critical Elements
*****
None

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*****
Highest Flow Instability Indexes
*****
All links are stable.

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*****
Routing Time Step Summary
*****
Minimum Time Step      : 4.50 sec
Average Time Step      : 5.00 sec
Maximum Time Step      : 5.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00
Percent Not Converging  : 0.00

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*****
Subcatchment Runoff Summary
*****

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Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
119	133.60	0.00	0.00	131.29	2.27	0.32	0.11	0.017
120	133.60	0.00	0.00	133.60	0.00	0.00	0.00	0.000
121	133.60	0.00	0.00	133.60	0.00	0.00	0.00	0.000
122	133.60	0.00	0.00	133.60	0.00	0.00	0.00	0.000
123	133.60	0.00	0.00	133.55	0.05	0.00	0.00	0.000
124	133.60	0.00	0.00	133.60	0.00	0.00	0.00	0.000
125	133.60	0.00	0.00	133.60	0.00	0.00	0.00	0.000
126	133.60	0.00	0.00	133.60	0.00	0.00	0.00	0.000
127	133.60	0.00	0.00	124.21	9.23	0.60	0.21	0.069
130	133.60	0.00	0.00	132.80	0.79	0.31	0.11	0.006
131	133.60	0.00	0.00	132.00	1.57	0.07	0.03	0.012
132	133.60	0.00	0.00	132.20	1.38	0.05	0.02	0.010
EXT	133.60	0.00	0.00	133.60	0.00	0.00	0.00	0.000

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*****
Node Depth Summary
*****

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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J36	JUNCTION	0.00	0.00	255.19	0 00:00	0.00
J40	JUNCTION	0.00	0.00	254.00	0 00:00	0.00
J41	JUNCTION	0.00	0.00	253.18	0 00:00	0.00
J42	JUNCTION	0.00	0.00	252.00	0 00:00	0.00
J43	JUNCTION	0.00	0.00	251.75	0 00:00	0.00
J44	JUNCTION	0.00	0.00	251.50	0 00:00	0.00
J45	JUNCTION	0.00	0.00	251.10	0 00:00	0.00
J46	JUNCTION	0.00	0.00	250.71	0 00:00	0.00
J47	JUNCTION	0.00	0.00	250.31	0 00:00	0.00
J48	JUNCTION	0.00	0.00	250.18	0 00:00	0.00
J49	JUNCTION	0.00	0.00	250.18	0 00:00	0.00
J50	JUNCTION	0.00	0.00	250.17	0 00:00	0.00
J51	JUNCTION	0.00	0.00	250.17	0 00:00	0.00
J52	JUNCTION	0.00	0.00	250.17	0 00:00	0.00
J53	JUNCTION	0.00	0.00	250.16	0 00:00	0.00
J54	JUNCTION	0.00	0.00	249.33	0 00:00	0.00
J55	JUNCTION	0.00	0.00	248.65	0 00:00	0.00
J56	JUNCTION	0.00	0.00	246.12	0 00:00	0.00
H09	OUTFALL	0.00	0.00	0.00	0 00:00	0.00
H10	OUTFALL	0.00	0.00	257.66	0 00:00	0.00
H11	OUTFALL	0.00	0.00	0.00	0 00:00	0.00

S12	OUTFALL	0.00	0.00	246.00	0	00:00	0.00
S13	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
S14	OUTFALL	0.00	0.00	251.00	0	00:00	0.00

Node Inflow Summary

Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J36	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J40	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J41	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J42	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J43	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J44	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J45	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J46	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J47	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J48	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J49	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J50	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J51	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J52	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J53	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J54	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J55	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
J56	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
H09	OUTFALL	0.209	0.209	0 12:00	0.604	0.604	0.000
H10	OUTFALL	0.002	0.002	0 12:00	0.000308	0.000308	0.000
H11	OUTFALL	0.109	0.109	0 12:00	0.316	0.316	0.000
S12	OUTFALL	0.000	0.000	0 00:00	0	0	0.000 ltr
S13	OUTFALL	0.142	0.142	0 12:00	0.382	0.382	0.000
S14	OUTFALL	0.018	0.018	0 11:50	0.0526	0.0526	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pent	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
H09	94.27	0.007	0.209	0.604
H10	0.42	0.001	0.002	0.000
H11	94.28	0.004	0.109	0.316
S12	0.00	0.000	0.000	0.000
S13	94.30	0.005	0.142	0.382
S14	94.28	0.001	0.018	0.053
System	62.93	0.017	0.480	1.355

Link Flow Summary

Link	Type	Maximum Flow CMS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C2_16	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_17	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_18	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_19	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_20	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_21	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_22	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_23	CHANNEL	0.000	0 00:00	0.00	0.00	0.00
C2_24	CHANNEL	0.000	0 00:00	0.00	0.00	0.00

C2_25	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_26	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_27	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_28	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_29	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_30	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_31	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_32	CHANNEL	0.000	0	00:00	0.00	0.00	0.00
C2_33	CHANNEL	0.000	0	00:00	0.00	0.00	0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C2_16	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_17	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_18	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_19	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_20	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_21	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_22	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_23	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_24	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_25	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_26	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_27	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_28	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_29	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_30	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_31	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_32	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C2_33	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 16 10:34:44 2016
Analysis ended on: Fri Dec 16 10:34:46 2016
Total elapsed time: 00:00:02



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Appendix D

Post-Development Catchment Parameters

Project Name: LM Barrie / BlueSky
 Project No: 300039269
 Location: Barrie, ON
 Designed: MLZ/JM
 Checked: PCC
 Date: 7/20/2017



Proposed Catchments Imperviousness

Watershed	Catchment	Total Area (ha)	Proposed Landuse Areas (ha)										Impervious (ha)	Imperviousness (%)
			Lots @ 50% Imp	ROW @ 70% Imp (incl d/w)	Pond @ 50% Imp	Park @ 0% Imp	Institutional @ 50% Imp	Mixed Use @ 50% Imp	External ROW @ 50% Imp	Yonge St. Mixed Use @ 80% Imp	Neighbourhood Mixed Use @ 50% Imp	Med/High Intensity Residential Area @ 60% Imp		
Hewitt's Creek														
	15	21.58	13.56	8.02	0								12.39	57%
	15A	5.14	0.51			4.63							0.26	5%
	16	20.47	12.11	6.88	1.48								11.61	57%
	16A	1.65	0.64	0.36		0.65							0.57	35%
	16B	1.19	0.77	0.42									0.68	57%
	204	0.29	0.29										0.15	50%
	205	0.30	0.24	0.06									0.16	54%
	208	0.21	0.09	0.12									0.13	61%

Project Name: LM Barrie / BlueSky
 Project No: 300039296
 Location: Barrie, ON
 Designed: MLZ/JM
 Checked: PCC
 Date: 7/20/2017



Proposed Catchments Imperviousness

Watershed	Catchment	Total Area (ha)	Proposed Landuse Areas (ha)										Impervious (ha)	Imperviousness (%)
			Lots @ 50% Imp	ROW @ 70% Imp (incl d/w)	Pond @ 50% Imp	Park @ 0% Imp	Institutional @ 50% Imp	Mixed Use @ 50% Imp	External ROW @ 50% Imp	Yonge St. Mixed Use @ 80% Imp	Neighbourhood Mixed Use @ 50% Imp	Med/High Intensity Residential Area @ 60% Imp		
Sandy Cove Creek														
	11B	7.19	4.85	2.34									4.06	57%
	14A	11.65	8.05	3.60									6.55	56%
	14B	22.49	9.43	4.95	3.34	2.33	2.44						11.07	49%
	14-Ext	1.00							1.00				0.50	50%
	206	1.11	1.11										0.56	50%
	207	0.36	0.18	0.18									0.22	60%
	209	0.45	0.45										0.23	50%

Project Name: LM Barrie / BlueSky
Project No: 300039296
Location: Barrie, ON
Designed: MLZ/JM
Checked: PCC
Date: 7/20/2017



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Proposed Conditions Catchments

Determination of Soils Parameters - Proposed Catchments								
Watershed	Catchment	Total Area (ha)	Imp Area (ha)	Perv Area (ha)	Soil for Green and Ampt Parameters	Suction Head (mm)	Conductivity (mm/hr)	Initial Deficit (frac.)
Hewitt's Creek								
	15	21.58	12.39	9.19	Mixed Sand/Clay	57.614	110.0	0.344
	15A	5.14	0.26	4.89	Mixed Sand/Clay	57.614	110.0	0.344
	16	20.47	11.61	8.86	Mixed Sand/Clay	57.614	110.0	0.344
	16A	1.65	0.57	1.08	Mixed Sand/Clay	57.614	110.0	0.344
	16B	1.19	0.68	0.51	Mixed Sand/Clay	57.614	110.0	0.344
	204	0.29	0.15	0.15	Mixed Sand/Clay	57.614	110.0	0.344
	205	0.30	0.16	0.14	Mixed Sand/Clay	57.614	110.0	0.344
	208	0.21	0.13	0.08	Mixed Sand/Clay	57.614	110.0	0.344
		50.83						

7/20/2017

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Project Name: LM Barrie / BlueSky
Project No: 300039296
Location: Barrie, ON
Designed: MLZ/JM
Checked: PCC
Date: 7/20/2017



Proposed Conditions Catchments

Determination of Soils Parameters - Proposed Catchments								
Watershed	Catchment	Total Area (ha)	Imp Area (ha)	Perv Area (ha)	Soil for Green and Ampt Parameters	Suction Head (mm)	Conductivity (mm/hr)	Initial Deficit (frac.)
Sandy Cove Creek								
	11B	7.19	4.06	3.13	Mixed Sand/Clay	57.614	110.0	0.344
	14A	11.65	6.55	5.11	Mixed Sand/Clay	57.614	110.0	0.344
	14B	22.49	11.07	11.42	Mixed Sand/Clay	57.614	110.0	0.344
	14-Ext	1.00	0.50	0.50	Mixed Sand/Clay	57.614	110.0	0.344
	206	1.11	0.56	0.56	Mixed Sand/Clay	57.614	110.0	0.344
	207	0.36	0.22	0.14	Mixed Sand/Clay	57.614	110.0	0.344
	209	0.45	0.23	0.23	Mixed Sand/Clay	57.614	110.0	0.344
		20.76						

7/20/2017

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Proposed Catchment			Post Development Land Use (ha)									
Watershed	Catchment	Total Area (ha)	Hay/Pasture	Crop Land	Low Intensity Development	High Intensity Development Commercial	High Intensity Development Residential	Transitional	Forest	Wetland	Open Water	Total Area (ha)
Sandy Cove Creek												
	206	0.45			0.13		0.32					0.45
	11b	7.19					7.19					7.19
	14	38.57			2.02	2.43	30.20	1.96			1.96	38.57
	14-ROW	2.00				2.00						2.00
	207	0.36					0.36					0.36
	209	1.10			0.06		1.04					1.10
	Total Internal	47.67	0.00	0.00	2.15	2.43	38.07	1.96	0.00	0.00	1.96	47.67
	Total Ext. ROW	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00



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Appendix E

Low-Impact Development (LID) Techniques

Project Name: LMB/Blue Sky
Project No: 300039296
Location: Barrie, ON
Designed: MLZ/JM
Checked: PCC
Date: 7/20/2017



Proposed Catchments LIDs

Watershed	Catchment	Total Area (ha)	Impervious (ha)	Target Infiltration Volumes			Infiltration Trenches with driveways (m)	Total Length of Infiltration Trenches	Infiltration Trench Area (m ²)	Additional Infiltration Gallery Area (m ²)	Infiltration Loss from PCSWMM (mm)	Infiltration (m ³)	Volume of Infiltrated (mm)
				25mm Volume (m ³)	12.5mm Volume (m ³)	5mm Volume (m ³)							
Hewitt's Creek													
	15	21.58	12.39	3099	1549	620	595.2	1417.6	1701.1		1735.29	2951.94	23.8
	15A	5.14	0.26	64	32	13	Park block drainage directed to SWMF. No additional Park Block LIDs proposed. Infiltration targets achieved through SWMF infiltration basin.						
	16	20.47	11.61	2903	1451	581	403.2	1317.8	1581.4		1715.29	2712.49	23.4
	16A ^A	1.65	0.57	143	71	29	0.0	0.0	0.0	350	1271.77	445.12	78.1
	16B	1.19	0.68	170	85	34	38.4	38.4	46.1		1673.33	77.11	11.4
	204	0.29	0.15	36	18	7	0.0	0.0	0.0		0.00	0.00	0.0
	205	0.30	0.16	41	20	8	0.0	0.0	0.0		0.00	0.00	0.0
	208 ^B	0.21	0.13	32	16	6	0.0	0.0	0.0	110	891.39	98.05	76.0

Notes:

- 'Infiltration Trench Area' base on a 1.2m wide trench in the ROW
- All infiltration trenches and galleries assumed to be 1.4m deep unless otherwise noted
- Volume Infiltrated based on the 24hr SCS 5-year design storm, with infiltration occurring up to 24hrs after the end of the storm
- A - Exact placement of infiltration to be determined within daylight triangle, assumes a depth of 1600mm
- B - Exact placement of infiltration to be determined within daylight triangle, assumes a depth of 1400mm

Project Name: LMB/Blue Sky
Project No: 300039296
Location: Barrie, ON
Designed: MLZ
Checked: PCC
Date: 7/20/2017



Proposed Catchments LIDs

Watershed	Catchment	Total Area (ha)	Impervious (ha)	Target Infiltration Volumes			Infiltration Trenches with driveways (m)	Total Length of Infiltration Trenches	Infiltration Trench Area (m ²)	Additional Infiltration Gallery Area (m ²)	Infiltration Loss from PCSWMM (mm)	Infiltration (m ³)	Volume of Infiltrated (mm)
				25mm Volume (m ³)	12.5mm Volume (m ³)	5mm Volume (m ³)							
Sandy Cove Creek													
	11B	7.19	4.06	1016	508	203	182.4	674.5	809.4		1670.74	1352.30	33.3
	14A	11.65	6.55	1636	818	327	192.0	434.0	520.8		1705.17	887.97	13.6
	14B	22.49	11.07	2768	1384	554	403.2	925.4	1110.5		1731.34	1922.70	17.4
	14-Ext	Mapleview Drive LIDs to be determined by the City											
	206 ^A	1.11	0.56	140	70	28				550	785.46	432.00	77.1
	207	0.36	0.22	54	27	11				200	829.69	165.94	76.8
	209 ^B	0.45	0.23	58	29	12				300	598.20	179.46	78.0

Notes:
 - 'Infiltration Trench Area' base on a 1.2m wide trench in the ROW
 - All infiltration trenches and galleries assumed to be 1.4m deep unless otherwise noted
 - Volume Infiltrated based on the 24hr SCS 5-year design storm, with infiltration occurring up to 24hrs after the end of the storm
 A - 0.8m wide infiltration trench to be located in NHS buffer
 B - 0.8m wide infiltration trench to be located in NHS buffer

Post Development - 5yr 24hr SCS Storm LIDs Included

Untitled

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

PROJECT TITLE: Blue Sky and LM Barrie
PROJECT NO: 300039296
MODEL CREATED BY: R.J.BURNSIDE AND ASSOCIATES LTD

Element Count

Number of rain gages 18
Number of subcatchments ... 16
Number of nodes 29
Number of links 24
Number of pollutants 0
Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
100yr_SCS_24h_Type_II_133.6mm	100yr_SCS_24h_Type_II_133.6mm	INTENSITY	15 min.
100yr_SCS_6h_106.5mm	100yr_SCS_6h_106.5mm	INTENSITY	5 min.
10yr_SCS_24h_Type_II_89.9mm	10yr_SCS_24h_Type_II_89.9mm	INTENSITY	15 min.
10yr_SCS_6h_70.8mm	10y_SCS_6h_70.8mm	INTENSITY	5 min.
25mm	25mm	INTENSITY	5 min.
25mm_SCS_24h_Type_II_25mm	25mm_SCS_24h_Type_II_25mm	INTENSITY	15 min.
25mm_SCS_6h_25mm	25mm_SCS_6h_25mm	INTENSITY	5 min.
25yr_SCS_24h_Type_II_107.5mm	25yr_SCS_24h_Type_II_107.5mm	INTENSITY	15 min.
25yr_SCS_6h_85.2mm	25yr_SCS_6h_85.2mm	INTENSITY	5 min.
2yr_SCS_24h_Type_II_55mm	2yr_SCS_24h_Type_II_55mm	INTENSITY	15 min.
2yr_SCS_6h_42.3mm	2yr_SCS_6h_42.3mm	INTENSITY	5 min.
50yr_SCS_24h_Type_II_120.6mm	50yr_SCS_24h_Type_II_120.6mm	INTENSITY	15 min.
50yr_SCS_6h_95.9mm	50yr_SCS_6h_95.9mm	INTENSITY	5 min.
5yr_SCS_24h_Type_II_76mm	5yr_SCS_24h_Type_II_76mm	INTENSITY	15 min.
5yr_SCS_6h_59.5mm	5yr_SCS_6h_59.5mm	INTENSITY	5 min.
Hurricane_Hazel1_(Southern_Ontario)	Hurricane_Hazel1_(Southern_Ontario)	INTENSITY	60 min.
NO_RAIN	NO_RAIN	INTENSITY	5 min.
SCS_6h_1mm_Jordan	SCS_6h_1mm_Jordan	INTENSITY	5 min.

Subcatchment Summary

Name	Area	width	%Imperv	%Slope	Rain Gage
Outlet					
11B	7.19	199.73	57.00	1.2000	
5yr_SCS_24h_Type_II_76mm J41					
14a	11.66	187.41	56.00	1.2000	
5yr_SCS_24h_Type_II_76mm SWMF14					
14b	22.50	362.75	49.00	1.2000	
5yr_SCS_24h_Type_II_76mm SWMF14					
14-EXT	1.01	32.37	50.00	1.0000	
5yr_SCS_24h_Type_II_76mm SWMF14					

Page 1

		Untitled		
15	21.57	431.34	57.00	1.5000
5yr_SCS_24h_Type_II_76mm SWMF15				
15a	5.15	177.74	5.00	1.0000
5yr_SCS_24h_Type_II_76mm SWMF15				
16	20.47	511.78	57.00	1.5000
5yr_SCS_24h_Type_II_76mm SWMF16				
16a	1.65	275.15	35.00	3.0000
5yr_SCS_24h_Type_II_76mm H11a				
16b	1.19	108.41	57.00	0.5000
5yr_SCS_24h_Type_II_76mm SWMF16				
204	0.30	18.91	50.00	2.0000
5yr_SCS_24h_Type_II_76mm H09				
205	0.30	20.24	54.00	2.0000
5yr_SCS_24h_Type_II_76mm H10				
206	1.11	554.80	50.00	2.0000
5yr_SCS_24h_Type_II_76mm S13				
207	0.36	89.88	60.00	1.0000
5yr_SCS_24h_Type_II_76mm S14				
208	0.21	59.91	61.00	0.6000
5yr_SCS_24h_Type_II_76mm H11a				
209	0.45	226.70	50.00	2.0000
5yr_SCS_24h_Type_II_76mm S14				
EXT	3.31	300.87	0.00	3.0000
5yr_SCS_24h_Type_II_76mm S13				

LID Control Summary

Imperv Subcatchment Treated	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered

11B	LID_SWMF11B	1	809.00	1.20	1.13
92.00					
14a	LID_SWMF14	1	520.80	1.20	0.45
49.00					
14b	LID_SWMF14	1	1110.50	1.20	0.49
70.00					
15	LID_SWMF15	1	1701.00	1.20	0.79
94.00					
16	LID_SWMF16	1	1581.00	1.20	0.77
81.00					
16a	LID_16a	1	350.00	2.00	2.12
100.00					
16b	LID_16b	1	46.10	1.20	0.39
49.00					
206	LID_206	1	550.00	0.80	4.96
100.00					
207	LID_207	2	100.00	5.00	5.56
100.00					
208	LID_208	2	55.00	5.00	5.25
100.00					
209	LID_206	1	300.00	0.80	6.62
100.00					

Node Summary

Page 2

		Untitled			
Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J36	JUNCTION	255.00	2.50	0.0	
J38	JUNCTION	259.65	0.30	0.0	
J39	JUNCTION	258.62	0.87	0.0	
J41	JUNCTION	253.18	1.98	0.0	
J42	JUNCTION	252.00	1.98	0.0	
J43	JUNCTION	251.75	1.91	0.0	
J44	JUNCTION	251.50	1.46	0.0	
J45	JUNCTION	251.10	2.21	0.0	
J46	JUNCTION	250.71	2.26	0.0	
J47	JUNCTION	250.31	2.67	0.0	
J48	JUNCTION	250.18	2.67	0.0	
J49	JUNCTION	250.18	2.45	0.0	
J50	JUNCTION	250.17	2.20	0.0	
J51	JUNCTION	250.17	1.81	0.0	
J52	JUNCTION	250.17	2.89	0.0	
J53	JUNCTION	250.16	2.99	0.0	
J54	JUNCTION	249.33	3.38	0.0	
J55	JUNCTION	248.65	3.70	0.0	
J56	JUNCTION	246.12	3.70	0.0	
H09	OUTFALL	0.00	0.00	0.0	
H10	OUTFALL	257.66	0.00	0.0	
H11	OUTFALL	0.00	249.45	0.0	
H11a	OUTFALL	0.00	255.81	0.0	
S12	OUTFALL	246.00	2.85	0.0	
S13	OUTFALL	243.90	11.02	0.0	
S14	OUTFALL	251.00	0.00	0.0	
SWMF14	STORAGE	254.20	3.00	0.0	
SWMF15	STORAGE	256.15	3.80	0.0	
SWMF16	STORAGE	258.80	4.50	0.0	

Link Summary

Name	From Node	To Node	Type	Length
%Slope Roughness				
C1	J38	H11	CONDUIT	115.4
9.1375				
C12	J39	H11a	CONDUIT	349.1
1.0199				
C13	J36	S13	CONDUIT	521.1
0.3838				
C2_18	J41	J42	CONDUIT	100.0
1.1801				
C2_19	J42	J43	CONDUIT	100.0
0.2500				
C2_20	J43	J44	CONDUIT	100.0
0.2500				
C2_21	J44	J45	CONDUIT	100.0
0.4000				
C2_22	J45	J46	CONDUIT	100.0
0.3900				
C2_23	J46	J47	CONDUIT	100.0
0.3980				
C2_24	J47	J48	CONDUIT	100.0
0.1290				
C2_25	J48	J49	CONDUIT	100.0

		Untitled			
0.0060	0.0500	J49	J50	CONDUIT	100.0
C2_26					
0.0030	0.0500	J50	J51	CONDUIT	100.0
C2_27					
0.0030	0.0500	J51	J52	CONDUIT	100.0
C2_28					
0.0030	0.0500	J52	J53	CONDUIT	100.0
C2_29					
0.0030	0.0500	J53	J54	CONDUIT	100.0
C2_30					
0.8310	0.0500	J54	J55	CONDUIT	100.0
C2_31					
0.6840	0.0500	J55	J56	CONDUIT	100.0
C2_32					
2.5308	0.0500	J56	S12	CONDUIT	39.0
C2_33					
0.3075	0.0500				
OR1		SWMF14	J36	ORIFICE	
OR16		SWMF14	J36	ORIFICE	
W1		SWMF14	J36	WEIR	
W11		SWMF15	J38	WEIR	
W12		SWMF16	J39	WEIR	

Cross Section Summary

Full Conduit Flow	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels

C1	TRAPEZOIDAL	0.30	6.27	0.29	21.80	1
5.49						
C12	CIRCULAR	0.75	0.44	0.19	0.75	1
1.12						
C13	CIRCULAR	1.80	2.54	0.45	1.80	1
7.12						
C2_18	2_18	1.98	95.65	0.96	99.00	1
202.37						
C2_19	2_19	1.91	80.50	0.81	99.00	1
69.88						
C2_20	2_20	1.31	46.13	0.46	98.70	1
27.69						
C2_21	2_21	1.46	50.65	0.51	98.00	1
41.10						
C2_22	2_22	2.21	136.50	1.38	98.40	1
211.41						
C2_23	2_23	2.26	136.62	1.37	99.00	1
212.96						
C2_24	2_24	2.67	123.98	1.24	99.00	1
102.96						
C2_25	2_25	2.45	105.73	1.06	99.00	1
17.03						
C2_26	2_26	2.20	78.67	0.79	99.00	1
7.35						
C2_27	2_28	1.81	60.41	0.61	98.00	1
4.78						
C2_28	2_28	1.81	60.41	0.61	98.00	1
4.78						
C2_29	2_29	2.89	128.35	1.30	98.00	1

Untitled						
16.76						
C2_30	2_30	2.99	116.36	1.18	98.00	1
236.87						
C2_31	2_31	3.38	137.44	1.39	98.00	1
282.67						
C2_32	2_32	3.70	163.81	1.68	98.00	1
735.38						
C2_33	2_33	2.85	104.64	1.18	99.00	1
129.77						

Transect Summary

Transect 1_1

Area:	0.0006	0.0017	0.0032	0.0050	0.0071
	0.0093	0.0119	0.0146	0.0176	0.0209
	0.0244	0.0282	0.0322	0.0365	0.0410
	0.0457	0.0507	0.0558	0.0613	0.0669
	0.0727	0.0788	0.0852	0.0917	0.0985
	0.1056	0.1129	0.1204	0.1282	0.1363
	0.1446	0.1531	0.1620	0.1710	0.1804
	0.1900	0.2026	0.2230	0.2636	0.3155
	0.3720	0.4321	0.4947	0.5600	0.6278
	0.6984	0.7713	0.8462	0.9227	1.0000

Hrad:	0.0438	0.0940	0.1380	0.1838	0.2310
	0.2758	0.3189	0.3608	0.3996	0.4378
	0.4755	0.5130	0.5521	0.5915	0.6305
	0.6691	0.7079	0.7469	0.7856	0.8240
	0.8620	0.8986	0.9351	0.9715	1.0078
	1.0415	1.0753	1.1092	1.1432	1.1776
	1.2111	1.2447	1.2786	1.3130	1.3475
	1.3816	1.3846	1.3248	1.1644	0.4760
	0.5278	0.5801	0.6326	0.6849	0.7357
	0.7850	0.8359	0.8874	0.9431	1.0000

width:	0.0123	0.0168	0.0212	0.0249	0.0279
	0.0310	0.0340	0.0371	0.0403	0.0436
	0.0469	0.0502	0.0532	0.0562	0.0592
	0.0622	0.0652	0.0681	0.0710	0.0739
	0.0768	0.0798	0.0828	0.0859	0.0889
	0.0922	0.0954	0.0987	0.1019	0.1052
	0.1085	0.1118	0.1151	0.1184	0.1217
	0.1277	0.1977	0.3933	0.6218	0.7018
	0.7519	0.7894	0.8226	0.8544	0.8899
	0.9239	0.9510	0.9751	0.9887	1.0000

Transect 1_10

Area:	0.0005	0.0017	0.0035	0.0059	0.0088
	0.0123	0.0164	0.0216	0.0283	0.0358
	0.0443	0.0543	0.0662	0.0796	0.0952
	0.1130	0.1334	0.1543	0.1757	0.1974
	0.2195	0.2417	0.2644	0.2872	0.3105
	0.3344	0.3592	0.3842	0.4092	0.4343
	0.4595	0.4850	0.5108	0.5370	0.5634
	0.5902	0.6174	0.6449	0.6728	0.7010
	0.7294	0.7581	0.7872	0.8164	0.8462
	0.8762	0.9067	0.9374	0.9686	1.0000

Untitled					
Hrad:	0.0152	0.0375	0.0501	0.0701	0.0890
	0.1017	0.1196	0.1313	0.1396	0.1599
	0.1686	0.1762	0.1822	0.1890	0.1974
	0.2046	0.2036	0.2310	0.2586	0.2840
	0.3132	0.3415	0.3683	0.3969	0.4213
	0.4477	0.4559	0.4864	0.5168	0.5471
	0.5771	0.5982	0.6225	0.6467	0.6713
	0.6926	0.7136	0.7378	0.7577	0.7836
	0.8089	0.8321	0.8536	0.8799	0.8955
	0.9167	0.9392	0.9570	0.9808	1.0000
width:	0.0312	0.0446	0.0690	0.0839	0.0985
	0.1209	0.1409	0.1938	0.2281	0.2424
	0.2864	0.3405	0.4027	0.4667	0.5224
	0.6209	0.6552	0.6679	0.6793	0.6950
	0.7008	0.7079	0.7178	0.7240	0.7464
	0.7732	0.7879	0.7899	0.7919	0.7939
	0.7962	0.8108	0.8206	0.8303	0.8392
	0.8522	0.8651	0.8741	0.8879	0.8945
	0.9018	0.9110	0.9221	0.9278	0.9450
	0.9558	0.9653	0.9795	0.9875	1.0000

Transect 1_11

Area:	0.0027	0.0145	0.0287	0.0438	0.0593
	0.0751	0.0913	0.1077	0.1245	0.1415
	0.1586	0.1761	0.1938	0.2116	0.2297
	0.2480	0.2664	0.2851	0.3038	0.3228
	0.3421	0.3618	0.3817	0.4017	0.4220
	0.4425	0.4631	0.4840	0.5051	0.5264
	0.5479	0.5696	0.5915	0.6136	0.6359
	0.6584	0.6812	0.7041	0.7273	0.7506
	0.7742	0.7980	0.8221	0.8467	0.8714
	0.8964	0.9217	0.9474	0.9734	1.0000

Hrad:	0.0116	0.0288	0.0533	0.0782	0.1040
	0.1280	0.1538	0.1781	0.2018	0.2272
	0.2511	0.2746	0.2989	0.3236	0.3464
	0.3698	0.3940	0.4178	0.4411	0.4634
	0.4810	0.5015	0.5240	0.5460	0.5678
	0.5896	0.6112	0.6326	0.6536	0.6744
	0.6953	0.7160	0.7367	0.7571	0.7770
	0.7974	0.8176	0.8375	0.8570	0.8768
	0.8965	0.9134	0.9245	0.9419	0.9595
	0.9770	0.9930	1.0059	1.0164	1.0000

width:	0.3185	0.5024	0.5390	0.5599	0.5701
	0.5868	0.5939	0.6049	0.6170	0.6229
	0.6319	0.6415	0.6485	0.6541	0.6631
	0.6706	0.6764	0.6824	0.6890	0.6967
	0.7113	0.7215	0.7285	0.7359	0.7432
	0.7506	0.7578	0.7651	0.7729	0.7806
	0.7880	0.7955	0.8030	0.8105	0.8184
	0.8258	0.8332	0.8407	0.8486	0.8561
	0.8636	0.8736	0.8893	0.8989	0.9082
	0.9175	0.9282	0.9418	0.9577	1.0000

Transect 1_12

Area:	0.0003	0.0010	0.0024	0.0043	0.0067
	0.0099	0.0139	0.0189	0.0248	0.0315
	0.0389	0.0471	0.0562	0.0663	0.0772

			Untitled		
	0.0888	0.1011	0.1143	0.1283	0.1432
	0.1588	0.1750	0.1918	0.2095	0.2279
	0.2470	0.2669	0.2876	0.3094	0.3325
	0.3567	0.3819	0.4084	0.4373	0.4689
	0.5020	0.5355	0.5694	0.6035	0.6380
	0.6727	0.7077	0.7431	0.7791	0.8153
Hrad:	0.8518	0.8885	0.9256	0.9627	1.0000
	0.0195	0.0403	0.0548	0.0781	0.0894
	0.1035	0.1166	0.1273	0.1477	0.1681
	0.1876	0.2070	0.2174	0.2370	0.2589
	0.2798	0.2995	0.3146	0.3340	0.3533
	0.3744	0.3989	0.4199	0.4347	0.4561
	0.4779	0.4941	0.5093	0.5205	0.5248
	0.5422	0.5612	0.5490	0.5494	0.5389
	0.5647	0.5967	0.6285	0.6603	0.6919
	0.7234	0.7535	0.7788	0.8087	0.8394
width:	0.8699	0.9004	0.9332	0.9667	1.0000
	0.0140	0.0249	0.0446	0.0552	0.0751
	0.0958	0.1198	0.1491	0.1690	0.1884
	0.2086	0.2287	0.2601	0.2814	0.2998
	0.3189	0.3392	0.3653	0.3863	0.4075
	0.4264	0.4411	0.4593	0.4846	0.5025
	0.5198	0.5431	0.5678	0.5979	0.6371
	0.6617	0.6843	0.7482	0.8006	0.8751
	0.8937	0.9020	0.9100	0.9178	0.9254
	0.9330	0.9419	0.9567	0.9655	0.9730
	0.9806	0.9880	0.9926	0.9963	1.0000
Transect 1_13					
Area:	0.0003	0.0012	0.0025	0.0042	0.0064
	0.0089	0.0118	0.0148	0.0182	0.0217
	0.0254	0.0295	0.0340	0.0391	0.0449
	0.0514	0.0589	0.0669	0.0755	0.0849
	0.0951	0.1061	0.1178	0.1303	0.1433
	0.1570	0.1713	0.1869	0.2038	0.2220
	0.2416	0.2619	0.2830	0.3051	0.3283
	0.3541	0.3821	0.4111	0.4407	0.4721
	0.5075	0.5465	0.5900	0.6368	0.6867
Hrad:	0.7405	0.8003	0.8646	0.9315	1.0000
	0.0353	0.0775	0.1214	0.1461	0.1823
	0.2262	0.2733	0.3181	0.3642	0.4100
	0.4537	0.4696	0.4913	0.5009	0.4973
	0.5047	0.5225	0.5518	0.5781	0.5935
	0.6206	0.6452	0.6680	0.6999	0.7380
	0.7736	0.7895	0.7904	0.8053	0.8024
	0.8277	0.8744	0.9010	0.9311	0.9352
	0.8982	0.9170	0.9655	1.0108	0.9860
	0.9545	0.9051	0.8912	0.9095	0.9138
width:	0.9105	0.9335	0.9643	1.0131	1.0000
	0.0097	0.0158	0.0205	0.0285	0.0349
	0.0394	0.0430	0.0466	0.0498	0.0528
	0.0560	0.0627	0.0692	0.0779	0.0901
	0.1019	0.1126	0.1212	0.1306	0.1431
	0.1532	0.1643	0.1763	0.1860	0.1941
	0.2028	0.2169	0.2363	0.2530	0.2766
	0.2919	0.2995	0.3140	0.3276	0.3510
	0.3942	0.4168	0.4259	0.4360	0.4907
	0.5317	0.6040	0.6622	0.7004	0.7516

	0.8245	0.9067	Untitled	0.9869	1.0000
	0.9540				
Transect 1_14					
Area:	0.0021	0.0068	0.0131	0.0207	0.0297
	0.0393	0.0492	0.0593	0.0696	0.0805
	0.0919	0.1037	0.1159	0.1288	0.1423
	0.1564	0.1708	0.1854	0.2002	0.2154
	0.2309	0.2465	0.2625	0.2787	0.2960
	0.3151	0.3361	0.3581	0.3809	0.4044
	0.4293	0.4556	0.4828	0.5110	0.5393
	0.5678	0.5964	0.6251	0.6539	0.6829
	0.7120	0.7413	0.7713	0.8024	0.8340
Hrad:	0.8660	0.8988	0.9325	0.9662	1.0000
	0.0178	0.0430	0.0639	0.0856	0.1064
	0.1360	0.1658	0.1976	0.2291	0.2447
	0.2754	0.3054	0.3342	0.3590	0.3805
	0.4065	0.4328	0.4593	0.4810	0.5038
	0.5297	0.5554	0.5758	0.5852	0.6146
	0.6397	0.6608	0.6815	0.6981	0.7124
	0.6646	0.6873	0.7093	0.6102	0.6417
	0.6731	0.7044	0.7342	0.7638	0.7945
	0.8254	0.8560	0.8829	0.9072	0.9343
width:	0.9613	0.9798	0.9350	0.9675	1.0000
	0.1201	0.1589	0.2057	0.2518	0.2796
	0.2895	0.2976	0.3008	0.3063	0.3344
	0.3436	0.3521	0.3721	0.3898	0.4154
	0.4224	0.4284	0.4345	0.4445	0.4536
	0.4603	0.4670	0.4775	0.4836	0.5442
	0.5829	0.6366	0.6627	0.6843	0.7126
	0.7652	0.7919	0.8186	0.8378	0.8408
	0.8439	0.8469	0.8516	0.8563	0.8597
	0.8627	0.8795	0.9064	0.9328	0.9420
	0.9513	0.9950	0.9975	0.9987	1.0000
Transect 1_15					
Area:	0.0010	0.0046	0.0093	0.0147	0.0210
	0.0276	0.0344	0.0416	0.0491	0.0569
	0.0650	0.0732	0.0818	0.0906	0.0997
	0.1090	0.1186	0.1287	0.1390	0.1502
	0.1630	0.1780	0.1944	0.2120	0.2315
	0.2537	0.2784	0.3056	0.3349	0.3648
	0.3950	0.4258	0.4569	0.4882	0.5195
	0.5509	0.5823	0.6138	0.6454	0.6770
	0.7087	0.7405	0.7723	0.8042	0.8363
Hrad:	0.8684	0.9008	0.9335	0.9665	1.0000
	0.0127	0.0383	0.0617	0.0826	0.1090
	0.1369	0.1648	0.1895	0.2136	0.2394
	0.2664	0.2911	0.3139	0.3393	0.3637
	0.3834	0.4025	0.4218	0.4416	0.4591
	0.4702	0.4775	0.4801	0.4875	0.4498
	0.4447	0.4147	0.4117	0.3776	0.4055
	0.4335	0.4592	0.4886	0.5210	0.5534
	0.5856	0.6179	0.6501	0.6819	0.7137
	0.7454	0.7770	0.8085	0.8394	0.8702
	0.9008	0.9293	0.9552	0.9816	1.0000
width:	0.0831	0.1194	0.1480	0.1758	0.1897
	0.1984	0.2058	0.2162	0.2264	0.2341

			Untitled		
	0.2401	0.2477	0.2566	0.2629	0.2698
	0.2798	0.2902	0.3003	0.3100	0.3526
	0.4055	0.4657	0.4996	0.5362	0.6216
	0.6839	0.7760	0.8389	0.8734	0.8859
	0.8974	0.9130	0.9208	0.9225	0.9242
	0.9258	0.9275	0.9292	0.9312	0.9332
	0.9353	0.9373	0.9394	0.9421	0.9458
	0.9510	0.9583	0.9679	0.9788	1.0000
Transect 1_16					
Area:	0.0005	0.0012	0.0020	0.0030	0.0040
	0.0051	0.0072	0.0122	0.0195	0.0283
	0.0382	0.0492	0.0612	0.0740	0.0877
	0.1030	0.1204	0.1389	0.1581	0.1789
	0.2015	0.2257	0.2508	0.2761	0.3016
	0.3271	0.3529	0.3788	0.4049	0.4313
	0.4579	0.4847	0.5117	0.5389	0.5663
	0.5938	0.6216	0.6495	0.6776	0.7059
	0.7345	0.7632	0.7922	0.8214	0.8507
	0.8803	0.9101	0.9400	0.9699	1.0000
Hrad:					
	0.0217	0.0471	0.0701	0.0915	0.1118
	0.1305	0.0979	0.0799	0.0860	0.0992
	0.1145	0.1301	0.1492	0.1684	0.1871
	0.1995	0.2027	0.2228	0.2416	0.2455
	0.2654	0.2730	0.3006	0.3288	0.3571
	0.3850	0.4127	0.4394	0.4653	0.4908
	0.5174	0.5438	0.5701	0.5959	0.6218
	0.6475	0.6732	0.6986	0.7237	0.7486
	0.7733	0.7973	0.8211	0.8451	0.8693
	0.8938	0.9189	0.9460	0.9730	1.0000
Width:					
	0.0225	0.0259	0.0292	0.0326	0.0359
	0.0394	0.1164	0.2135	0.2762	0.3109
	0.3451	0.3821	0.4119	0.4409	0.4705
	0.5523	0.5966	0.6254	0.6569	0.7310
	0.7757	0.8295	0.8370	0.8422	0.8468
	0.8519	0.8572	0.8641	0.8722	0.8806
	0.8868	0.8930	0.8992	0.9057	0.9121
	0.9183	0.9245	0.9308	0.9373	0.9439
	0.9506	0.9580	0.9655	0.9725	0.9791
	0.9853	0.9907	0.9938	0.9969	1.0000
Transect 1_17					
Area:	0.0007	0.0022	0.0044	0.0073	0.0107
	0.0146	0.0190	0.0241	0.0296	0.0355
	0.0419	0.0489	0.0564	0.0646	0.0737
	0.0838	0.0957	0.1100	0.1260	0.1433
	0.1623	0.1831	0.2054	0.2298	0.2563
	0.2836	0.3113	0.3392	0.3671	0.3952
	0.4233	0.4516	0.4800	0.5084	0.5369
	0.5655	0.5941	0.6229	0.6519	0.6812
	0.7109	0.7409	0.7715	0.8025	0.8340
	0.8659	0.8984	0.9314	0.9652	1.0000
Hrad:					
	0.0231	0.0415	0.0617	0.0810	0.1031
	0.1252	0.1424	0.1621	0.1833	0.2039
	0.2240	0.2447	0.2669	0.2778	0.2971
	0.3129	0.3197	0.3266	0.3356	0.3440
	0.3516	0.3624	0.3708	0.3795	0.3579
	0.3671	0.4017	0.4363	0.4707	0.5051

			Untitled		
	0.5394	0.5737	0.6078	0.6335	0.6680
	0.7024	0.7359	0.7647	0.7927	0.8202
	0.8467	0.8676	0.8899	0.9112	0.9327
	0.9547	0.9737	0.9930	0.9988	1.0000
width:					
	0.0308	0.0528	0.0712	0.0895	0.1037
	0.1165	0.1337	0.1484	0.1613	0.1741
	0.1894	0.2045	0.2176	0.2397	0.2754
	0.3023	0.3695	0.4275	0.4706	0.5107
	0.5628	0.6053	0.6473	0.7314	0.7579
	0.7786	0.7821	0.7855	0.7888	0.7918
	0.7948	0.7978	0.8008	0.8025	0.8038
	0.8050	0.8072	0.8144	0.8224	0.8305
	0.8395	0.8539	0.8668	0.8806	0.8941
	0.9070	0.9227	0.9380	0.9663	1.0000
Transect 1_18					
Area:	0.0011	0.0031	0.0058	0.0100	0.0156
	0.0226	0.0310	0.0407	0.0518	0.0645
	0.0788	0.0952	0.1139	0.1331	0.1525
	0.1722	0.1921	0.2123	0.2327	0.2534
	0.2742	0.2954	0.3168	0.3386	0.3608
	0.3833	0.4061	0.4291	0.4525	0.4761
	0.5000	0.5241	0.5485	0.5732	0.5982
	0.6236	0.6492	0.6750	0.7010	0.7273
	0.7538	0.7805	0.8073	0.8343	0.8615
	0.8888	0.9163	0.9441	0.9720	1.0000
Hrad:					
	0.0182	0.0397	0.0566	0.0697	0.0812
	0.0918	0.1053	0.1189	0.1303	0.1428
	0.1512	0.1563	0.1679	0.1936	0.2198
	0.2442	0.2691	0.2942	0.3189	0.3432
	0.3668	0.3909	0.4119	0.4328	0.4544
	0.4756	0.4979	0.5196	0.5409	0.5640
	0.5869	0.6068	0.6277	0.6489	0.6655
	0.6888	0.7076	0.7317	0.7565	0.7728
	0.7965	0.8198	0.8435	0.8667	0.8891
	0.9109	0.9321	0.9535	0.9768	1.0000
width:					
	0.0619	0.0786	0.1257	0.1720	0.2274
	0.2736	0.3211	0.3676	0.4246	0.4789
	0.5506	0.6303	0.6784	0.6875	0.6940
	0.7052	0.7140	0.7218	0.7299	0.7382
	0.7476	0.7557	0.7691	0.7825	0.7939
	0.8059	0.8155	0.8260	0.8366	0.8443
	0.8519	0.8636	0.8738	0.8834	0.8989
	0.9053	0.9174	0.9226	0.9267	0.9411
	0.9464	0.9521	0.9571	0.9626	0.9689
	0.9757	0.9831	0.9901	0.9950	1.0000
Transect 1_19					
Area:	0.0013	0.0104	0.0246	0.0394	0.0546
	0.0702	0.0862	0.1026	0.1193	0.1362
	0.1534	0.1708	0.1884	0.2065	0.2249
	0.2434	0.2622	0.2811	0.3002	0.3195
	0.3389	0.3586	0.3785	0.3985	0.4187
	0.4392	0.4598	0.4806	0.5017	0.5230
	0.5445	0.5662	0.5881	0.6103	0.6327
	0.6554	0.6783	0.7015	0.7249	0.7487
	0.7727	0.7969	0.8213	0.8459	0.8708
	0.8959	0.9213	0.9470	0.9732	1.0000

Untitled

Hrad:

0.0088	0.0225	0.0467	0.0727	0.0981
0.1232	0.1485	0.1708	0.1967	0.2218
0.2457	0.2702	0.2939	0.3127	0.3368
0.3617	0.3861	0.4096	0.4333	0.4567
0.4793	0.5027	0.5258	0.5487	0.5701
0.5919	0.6140	0.6359	0.6562	0.6771
0.6984	0.7196	0.7389	0.7578	0.7769
0.7956	0.8148	0.8339	0.8500	0.8683
0.8895	0.9088	0.9269	0.9467	0.9665
0.9822	0.9975	1.0128	1.0198	1.0000

width:

0.1509	0.4631	0.5261	0.5419	0.5567
0.5702	0.5803	0.6011	0.6068	0.6145
0.6244	0.6324	0.6414	0.6605	0.6679
0.6732	0.6792	0.6864	0.6928	0.6996
0.7072	0.7134	0.7198	0.7263	0.7346
0.7420	0.7490	0.7559	0.7646	0.7725
0.7796	0.7868	0.7960	0.8053	0.8145
0.8238	0.8325	0.8412	0.8529	0.8623
0.8687	0.8768	0.8861	0.8936	0.9009
0.9121	0.9236	0.9351	0.9543	1.0000

Transect 1_2

Area:

0.0004	0.0015	0.0029	0.0047	0.0069
0.0094	0.0122	0.0154	0.0189	0.0227
0.0268	0.0313	0.0361	0.0411	0.0464
0.0521	0.0582	0.0647	0.0715	0.0788
0.0867	0.0956	0.1049	0.1153	0.1272
0.1404	0.1554	0.1723	0.1910	0.2114
0.2337	0.2578	0.2837	0.3114	0.3410
0.3723	0.4055	0.4404	0.4772	0.5158
0.5561	0.5983	0.6424	0.6882	0.7358
0.7853	0.8365	0.8896	0.9443	1.0000

Hrad:

0.0306	0.0662	0.0985	0.1328	0.1652
0.1969	0.2282	0.2589	0.2885	0.3188
0.3488	0.3785	0.4102	0.4430	0.4753
0.4952	0.5170	0.5420	0.5649	0.5852
0.5965	0.5837	0.6182	0.5734	0.5719
0.5561	0.5460	0.5437	0.5470	0.5545
0.5652	0.5784	0.5936	0.6105	0.6287
0.6480	0.6682	0.6892	0.7109	0.7332
0.7560	0.7793	0.8029	0.8269	0.8512
0.8758	0.9006	0.9256	0.9598	1.0000

width:

0.0143	0.0219	0.0294	0.0355	0.0416
0.0475	0.0534	0.0592	0.0652	0.0709
0.0766	0.0823	0.0875	0.0923	0.0972
0.1046	0.1119	0.1186	0.1259	0.1340
0.1493	0.1630	0.1689	0.2003	0.2215
0.2517	0.2840	0.3162	0.3485	0.3807
0.4129	0.4452	0.4774	0.5097	0.5419
0.5741	0.6064	0.6386	0.6709	0.7031
0.7353	0.7676	0.7998	0.8321	0.8643
0.8965	0.9288	0.9610	0.9839	1.0000

Transect 1_20

Area:

0.0017	0.0056	0.0108	0.0175	0.0253
0.0343	0.0446	0.0566	0.0698	0.0842
0.0997	0.1163	0.1337	0.1520	0.1709

Untitled

Hrad:

0.1905	0.2104	0.2303	0.2503	0.2704
0.2907	0.3110	0.3314	0.3519	0.3726
0.3934	0.4144	0.4356	0.4569	0.4784
0.5001	0.5219	0.5440	0.5665	0.5892
0.6122	0.6356	0.6593	0.6834	0.7079
0.7330	0.7587	0.7851	0.8122	0.8405
0.8699	0.9006	0.9324	0.9656	1.0000

width:

0.0190	0.0423	0.0624	0.0839	0.1064
0.1268	0.1413	0.1571	0.1786	0.1974
0.2181	0.2398	0.2635	0.2885	0.3112
0.3389	0.3721	0.4051	0.4379	0.4704
0.5029	0.5352	0.5668	0.5979	0.6280
0.6574	0.6866	0.7156	0.7443	0.7729
0.8012	0.8266	0.8504	0.8728	0.8950
0.9163	0.9380	0.9604	0.9776	0.9889
1.0003	1.0130	1.0186	1.0182	1.0099
1.0051	0.9988	0.9968	0.9904	1.0000

Transect 1_21

Area:

0.0913	0.1330	0.1762	0.2120	0.2415
0.2740	0.3203	0.3651	0.3963	0.4325
0.4635	0.4917	0.5146	0.5342	0.5569
0.5699	0.5726	0.5754	0.5782	0.5811
0.5837	0.5864	0.5897	0.5933	0.5976
0.6024	0.6071	0.6120	0.6168	0.6215
0.6264	0.6333	0.6414	0.6503	0.6594
0.6690	0.6782	0.6868	0.6991	0.7157
0.7325	0.7486	0.7701	0.7972	0.8319
0.8651	0.9014	0.9353	0.9749	1.0000

Hrad:

0.0030	0.0081	0.0147	0.0225	0.0316
0.0417	0.0529	0.0651	0.0782	0.0922
0.1069	0.1222	0.1381	0.1549	0.1722
0.1902	0.2086	0.2274	0.2465	0.2658
0.2855	0.3056	0.3260	0.3467	0.3678
0.3893	0.4111	0.4333	0.4557	0.4786
0.5018	0.5254	0.5492	0.5734	0.5978
0.6225	0.6475	0.6728	0.6984	0.7242
0.7503	0.7766	0.8032	0.8300	0.8573
0.8850	0.9130	0.9415	0.9705	1.0000

width:

0.0211	0.0410	0.0610	0.0796	0.0982
0.1161	0.1343	0.1536	0.1702	0.1915
0.2119	0.2333	0.2528	0.2695	0.2901
0.3110	0.3334	0.3578	0.3816	0.4050
0.4281	0.4496	0.4715	0.4926	0.5140
0.5357	0.5566	0.5779	0.5988	0.6169
0.6393	0.6591	0.6808	0.7026	0.7247
0.7450	0.7661	0.7872	0.8087	0.8304
0.8521	0.8740	0.8949	0.9134	0.9288
0.9459	0.9612	0.9745	0.9876	1.0000

Hrad:

0.1470	0.1983	0.2407	0.2828	0.3214
0.3596	0.3944	0.4242	0.4598	0.4818
0.5047	0.5242	0.5466	0.5748	0.5938
0.6117	0.6258	0.6357	0.6459	0.6566
0.6670	0.6797	0.6914	0.7040	0.7157
0.7268	0.7387	0.7498	0.7612	0.7759
0.7851	0.7972	0.8068	0.8161	0.8249
0.8356	0.8452	0.8547	0.8636	0.8721
0.8805	0.8886	0.8974	0.9088	0.9231

	0.9355	0.9499	Untitled 0.9662	0.9827	1.0000
Transect 1_22					
Area:					
	0.0013	0.0037	0.0068	0.0106	0.0151
	0.0205	0.0270	0.0346	0.0433	0.0530
	0.0635	0.0750	0.0874	0.1008	0.1150
	0.1301	0.1461	0.1630	0.1808	0.1994
	0.2186	0.2386	0.2592	0.2804	0.3024
	0.3250	0.3483	0.3724	0.3971	0.4225
	0.4480	0.4735	0.4992	0.5249	0.5508
	0.5768	0.6029	0.6294	0.6563	0.6837
	0.7116	0.7403	0.7698	0.8000	0.8309
	0.8624	0.8946	0.9277	0.9627	1.0000
Hrad:					
	0.0256	0.0510	0.0757	0.0974	0.1178
	0.1315	0.1447	0.1617	0.1803	0.2001
	0.2214	0.2393	0.2613	0.2777	0.2998
	0.3203	0.3388	0.3588	0.3797	0.4019
	0.4267	0.4497	0.4738	0.4961	0.5182
	0.5416	0.5630	0.5834	0.6050	0.6341
	0.6698	0.7054	0.7407	0.7752	0.8096
	0.8437	0.8740	0.8980	0.9182	0.9399
	0.9577	0.9632	0.9792	0.9915	1.0116
	1.0271	1.0402	1.0380	1.0067	1.0000
width:					
	0.0515	0.0728	0.0904	0.1094	0.1292
	0.1573	0.1881	0.2159	0.2423	0.2670
	0.2892	0.3160	0.3372	0.3656	0.3866
	0.4094	0.4345	0.4578	0.4798	0.5000
	0.5164	0.5346	0.5512	0.5696	0.5880
	0.6047	0.6234	0.6431	0.6613	0.6710
	0.6732	0.6753	0.6776	0.6804	0.6833
	0.6862	0.6920	0.7028	0.7164	0.7288
	0.7442	0.7696	0.7870	0.8075	0.8217
	0.8398	0.8600	0.8936	0.9562	1.0000
Transect 1_23					
Area:					
	0.0010	0.0035	0.0070	0.0115	0.0170
	0.0237	0.0318	0.0427	0.0545	0.0668
	0.0797	0.0931	0.1070	0.1215	0.1365
	0.1520	0.1681	0.1847	0.2019	0.2196
	0.2378	0.2566	0.2759	0.2957	0.3161
	0.3370	0.3585	0.3805	0.4030	0.4261
	0.4497	0.4738	0.4985	0.5237	0.5494
	0.5757	0.6025	0.6299	0.6578	0.6862
	0.7152	0.7447	0.7747	0.8053	0.8364
	0.8681	0.9003	0.9330	0.9662	1.0000
Hrad:					
	0.0190	0.0384	0.0601	0.0775	0.0945
	0.1111	0.1190	0.1257	0.1533	0.1800
	0.2059	0.2311	0.2556	0.2797	0.3032
	0.3263	0.3489	0.3713	0.3932	0.4149
	0.4364	0.4575	0.4784	0.4992	0.5197
	0.5400	0.5602	0.5802	0.6001	0.6199
	0.6395	0.6590	0.6784	0.6977	0.7169
	0.7360	0.7550	0.7740	0.7928	0.8116
	0.8304	0.8490	0.8676	0.8862	0.9047
	0.9231	0.9415	0.9599	0.9782	1.0000
width:					
	0.0543	0.0901	0.1158	0.1479	0.1796
	0.2131	0.2675	0.3395	0.3554	0.3712

	0.3870	0.4028	Untitled 0.4186	0.4344	0.4502
	0.4660	0.4819	0.4977	0.5135	0.5293
	0.5451	0.5609	0.5767	0.5925	0.6084
	0.6242	0.6400	0.6558	0.6716	0.6874
	0.7032	0.7191	0.7349	0.7507	0.7665
	0.7823	0.7981	0.8139	0.8297	0.8456
	0.8614	0.8772	0.8930	0.9088	0.9246
	0.9404	0.9562	0.9721	0.9879	1.0000
Transect 1_24					
Area:					
	0.0004	0.0016	0.0033	0.0056	0.0084
	0.0119	0.0160	0.0206	0.0258	0.0315
	0.0378	0.0448	0.0524	0.0609	0.0706
	0.0815	0.0937	0.1070	0.1212	0.1365
	0.1525	0.1696	0.1877	0.2067	0.2265
	0.2472	0.2688	0.2914	0.3151	0.3396
	0.3649	0.3911	0.4180	0.4460	0.4749
	0.5045	0.5348	0.5660	0.5979	0.6305
	0.6639	0.6979	0.7328	0.7684	0.8050
	0.8425	0.8808	0.9200	0.9598	1.0000
Hrad:					
	0.0228	0.0441	0.0644	0.0881	0.1087
	0.1265	0.1487	0.1705	0.1911	0.2130
	0.2268	0.2492	0.2636	0.2662	0.2803
	0.2892	0.2956	0.3114	0.3313	0.3529
	0.3681	0.3873	0.4096	0.4296	0.4529
	0.4711	0.4906	0.5093	0.5289	0.5495
	0.5727	0.5936	0.6130	0.6344	0.6549
	0.6798	0.7002	0.7264	0.7479	0.7710
	0.7945	0.8174	0.8394	0.8572	0.8780
	0.8967	0.9187	0.9381	0.9674	1.0000
width:					
	0.0196	0.0354	0.0513	0.0638	0.0775
	0.0943	0.1076	0.1208	0.1349	0.1476
	0.1665	0.1795	0.1987	0.2287	0.2518
	0.2817	0.3169	0.3434	0.3659	0.3866
	0.4144	0.4380	0.4583	0.4811	0.5000
	0.5247	0.5479	0.5722	0.5957	0.6180
	0.6372	0.6589	0.6820	0.7032	0.7252
	0.7422	0.7639	0.7792	0.7995	0.8179
	0.8357	0.8539	0.8730	0.8965	0.9170
	0.9397	0.9588	0.9807	0.9922	1.0000
Transect 1_25					
Area:					
	0.0003	0.0015	0.0034	0.0062	0.0097
	0.0141	0.0192	0.0251	0.0318	0.0393
	0.0476	0.0566	0.0664	0.0770	0.0884
	0.1005	0.1135	0.1272	0.1416	0.1567
	0.1726	0.1894	0.2069	0.2253	0.2446
	0.2647	0.2857	0.3076	0.3303	0.3539
	0.3783	0.4036	0.4297	0.4567	0.4845
	0.5132	0.5427	0.5731	0.6043	0.6363
	0.6693	0.7029	0.7375	0.7728	0.8089
	0.8457	0.8832	0.9216	0.9606	1.0000
Hrad:					
	0.0179	0.0391	0.0570	0.0768	0.0982
	0.1158	0.1372	0.1581	0.1783	0.1963
	0.2182	0.2396	0.2582	0.2775	0.2979
	0.3186	0.3374	0.3580	0.3786	0.3991
	0.4181	0.4380	0.4555	0.4739	0.4928
	0.5075	0.5284	0.5455	0.5652	0.5824

			Untitled		
	0.6026	0.6222	0.6419	0.6594	0.6787
	0.6987	0.7184	0.7360	0.7582	0.7731
	0.7963	0.8154	0.8352	0.8585	0.8767
	0.9009	0.9200	0.9436	0.9681	1.0000
width:	0.0183	0.0373	0.0600	0.0805	0.0989
	0.1216	0.1401	0.1590	0.1784	0.2004
	0.2181	0.2363	0.2573	0.2775	0.2967
	0.3155	0.3363	0.3552	0.3738	0.3927
	0.4129	0.4323	0.4542	0.4754	0.4962
	0.5216	0.5407	0.5640	0.5845	0.6077
	0.6279	0.6488	0.6695	0.6927	0.7139
	0.7345	0.7555	0.7787	0.7971	0.8232
	0.8406	0.8622	0.8832	0.9002	0.9228
	0.9388	0.9601	0.9767	0.9922	1.0000
Transect 1_3					
Area:	0.0017	0.0052	0.0097	0.0148	0.0205
	0.0265	0.0327	0.0392	0.0461	0.0534
	0.0614	0.0699	0.0790	0.0889	0.0993
	0.1104	0.1223	0.1348	0.1481	0.1622
	0.1770	0.1925	0.2089	0.2260	0.2440
	0.2627	0.2823	0.3026	0.3235	0.3457
	0.3691	0.3941	0.4203	0.4476	0.4759
	0.5054	0.5358	0.5671	0.5995	0.6330
	0.6672	0.7022	0.7377	0.7736	0.8099
	0.8467	0.8841	0.9220	0.9606	1.0000
Hrad:	0.0253	0.0494	0.0806	0.1086	0.1400
	0.1733	0.2057	0.2338	0.2577	0.2782
	0.2962	0.3178	0.3319	0.3488	0.3683
	0.3841	0.3996	0.4159	0.4315	0.4492
	0.4639	0.4814	0.4976	0.5140	0.5298
	0.5464	0.5648	0.5866	0.6010	0.6033
	0.6112	0.6127	0.6261	0.6419	0.6577
	0.6729	0.6922	0.7113	0.7238	0.7435
	0.7688	0.7938	0.8236	0.8544	0.8844
	0.9105	0.9373	0.9630	0.9821	1.0000
width:	0.0663	0.1048	0.1207	0.1363	0.1464
	0.1526	0.1588	0.1675	0.1787	0.1921
	0.2073	0.2199	0.2381	0.2547	0.2697
	0.2874	0.3059	0.3241	0.3432	0.3609
	0.3814	0.3999	0.4197	0.4396	0.4604
	0.4808	0.4998	0.5157	0.5381	0.5729
	0.6038	0.6431	0.6712	0.6973	0.7236
	0.7510	0.7740	0.7972	0.8282	0.8513
	0.8679	0.8846	0.8958	0.9054	0.9158
	0.9300	0.9432	0.9573	0.9781	1.0000
Transect 1_4					
Area:	0.0011	0.0033	0.0060	0.0094	0.0136
	0.0184	0.0240	0.0303	0.0374	0.0454
	0.0540	0.0632	0.0732	0.0837	0.0949
	0.1069	0.1196	0.1329	0.1467	0.1611
	0.1761	0.1918	0.2083	0.2257	0.2437
	0.2626	0.2823	0.3028	0.3241	0.3463
	0.3693	0.3931	0.4180	0.4437	0.4703
	0.4977	0.5262	0.5554	0.5857	0.6168
	0.6489	0.6821	0.7164	0.7518	0.7885
	0.8268	0.8669	0.9088	0.9531	1.0000

			Untitled		
Hrad:	0.0321	0.0647	0.0968	0.1177	0.1445
	0.1729	0.1944	0.2185	0.2409	0.2634
	0.2921	0.3140	0.3435	0.3725	0.3960
	0.4144	0.4417	0.4721	0.5020	0.5264
	0.5522	0.5763	0.5883	0.6125	0.6375
	0.6533	0.6766	0.6982	0.7153	0.7370
	0.7616	0.7757	0.7942	0.8191	0.8369
	0.8575	0.8790	0.8982	0.9200	0.9395
	0.9575	0.9728	0.9916	1.0056	1.0136
	1.0187	1.0172	1.0194	1.0071	1.0000
width:	0.0356	0.0512	0.0622	0.0798	0.0941
	0.1066	0.1235	0.1387	0.1551	0.1720
	0.1845	0.2010	0.2127	0.2244	0.2391
	0.2575	0.2703	0.2810	0.2917	0.3054
	0.3183	0.3321	0.3534	0.3678	0.3817
	0.4013	0.4166	0.4330	0.4524	0.4692
	0.4842	0.5061	0.5257	0.5411	0.5613
	0.5798	0.5980	0.6178	0.6360	0.6560
	0.6772	0.7006	0.7220	0.7471	0.7775
	0.8113	0.8520	0.8913	0.9462	1.0000
Transect 1_5					
Area:	0.0012	0.0034	0.0065	0.0103	0.0148
	0.0201	0.0262	0.0330	0.0405	0.0488
	0.0578	0.0675	0.0779	0.0891	0.1010
	0.1136	0.1269	0.1409	0.1557	0.1712
	0.1875	0.2044	0.2220	0.2403	0.2593
	0.2792	0.2999	0.3215	0.3439	0.3672
	0.3913	0.4163	0.4420	0.4685	0.4959
	0.5242	0.5534	0.5835	0.6145	0.6461
	0.6785	0.7114	0.7450	0.7793	0.8143
	0.8500	0.8862	0.9231	0.9608	1.0000
Hrad:	0.0260	0.0513	0.0753	0.0993	0.1215
	0.1425	0.1651	0.1855	0.2078	0.2285
	0.2499	0.2699	0.2923	0.3116	0.3326
	0.3531	0.3749	0.3958	0.4149	0.4343
	0.4562	0.4782	0.4993	0.5201	0.5393
	0.5547	0.5715	0.5899	0.6073	0.6255
	0.6435	0.6624	0.6829	0.7023	0.7186
	0.7363	0.7527	0.7705	0.7931	0.8149
	0.8395	0.8634	0.8854	0.9073	0.9302
	0.9545	0.9782	1.0005	1.0169	1.0000
width:	0.0445	0.0659	0.0857	0.1035	0.1221
	0.1414	0.1587	0.1780	0.1951	0.2135
	0.2311	0.2500	0.2665	0.2857	0.3035
	0.3216	0.3384	0.3559	0.3751	0.3941
	0.4108	0.4272	0.4444	0.4616	0.4805
	0.5030	0.5244	0.5446	0.5660	0.5867
	0.6078	0.6281	0.6469	0.6668	0.6898
	0.7116	0.7349	0.7571	0.7745	0.7926
	0.8079	0.8236	0.8411	0.8587	0.8752
	0.8902	0.9058	0.9225	0.9447	1.0000
Transect 1_6					
Area:	0.0013	0.0038	0.0068	0.0102	0.0142
	0.0186	0.0237	0.0297	0.0363	0.0436
	0.0517	0.0605	0.0701	0.0805	0.0921

			Untitled		
	0.1045	0.1180	0.1324	0.1476	0.1636
	0.1803	0.1977	0.2160	0.2351	0.2551
	0.2759	0.2975	0.3200	0.3433	0.3674
	0.3925	0.4183	0.4448	0.4723	0.5006
	0.5295	0.5591	0.5892	0.6199	0.6511
	0.6829	0.7154	0.7486	0.7822	0.8164
	0.8512	0.8866	0.9232	0.9610	1.0000
Hrad:					
	0.0253	0.0539	0.0827	0.1096	0.1337
	0.1537	0.1696	0.1850	0.2058	0.2253
	0.2393	0.2588	0.2777	0.2909	0.3012
	0.3190	0.3326	0.3522	0.3738	0.3955
	0.4164	0.4372	0.4552	0.4738	0.4942
	0.5135	0.5317	0.5507	0.5717	0.5902
	0.6089	0.6303	0.6501	0.6683	0.6884
	0.7128	0.7393	0.7643	0.7897	0.8141
	0.8412	0.8581	0.8824	0.9120	0.9347
	0.9554	0.9759	0.9830	0.9822	1.0000
width:					
	0.0517	0.0700	0.0819	0.0933	0.1058
	0.1210	0.1399	0.1603	0.1764	0.1934
	0.2158	0.2338	0.2525	0.2767	0.3055
	0.3276	0.3547	0.3759	0.3949	0.4135
	0.4328	0.4521	0.4744	0.4962	0.5161
	0.5371	0.5594	0.5809	0.6004	0.6224
	0.6444	0.6635	0.6840	0.7065	0.7270
	0.7427	0.7561	0.7707	0.7848	0.7997
	0.8117	0.8336	0.8482	0.8576	0.8733
	0.8907	0.9084	0.9391	0.9784	1.0000
Transect 1_7					
Area:					
	0.0003	0.0011	0.0025	0.0055	0.0089
	0.0126	0.0168	0.0217	0.0274	0.0341
	0.0416	0.0500	0.0592	0.0693	0.0803
	0.0921	0.1049	0.1184	0.1328	0.1481
	0.1643	0.1810	0.1983	0.2163	0.2351
	0.2546	0.2751	0.2961	0.3179	0.3407
	0.3643	0.3887	0.4140	0.4402	0.4672
	0.4953	0.5242	0.5541	0.5850	0.6170
	0.6498	0.6836	0.7185	0.7546	0.7919
	0.8307	0.8712	0.9131	0.9561	1.0000
Hrad:					
	0.0224	0.0492	0.0486	0.0750	0.1101
	0.1416	0.1659	0.1795	0.1936	0.2124
	0.2304	0.2501	0.2696	0.2886	0.3106
	0.3281	0.3520	0.3731	0.3938	0.4124
	0.4389	0.4681	0.4959	0.5184	0.5407
	0.5592	0.5839	0.6106	0.6275	0.6465
	0.6667	0.6882	0.7088	0.7287	0.7468
	0.7640	0.7859	0.8028	0.8176	0.8380
	0.8599	0.8756	0.8909	0.9096	0.9177
	0.9198	0.9297	0.9448	0.9677	1.0000
width:					
	0.0142	0.0231	0.0573	0.0732	0.0807
	0.0890	0.1010	0.1206	0.1415	0.1604
	0.1805	0.1997	0.2194	0.2400	0.2584
	0.2808	0.2978	0.3173	0.3372	0.3592
	0.3743	0.3868	0.3999	0.4172	0.4348
	0.4553	0.4711	0.4849	0.5066	0.5269
	0.5464	0.5649	0.5841	0.6041	0.6257
	0.6483	0.6671	0.6902	0.7156	0.7364
	0.7558	0.7808	0.8066	0.8298	0.8631

	0.9034	0.9374	Untitled		
			0.9668	0.9883	1.0000
Transect 1_8					
Area:					
	0.0002	0.0009	0.0020	0.0034	0.0054
	0.0080	0.0116	0.0156	0.0206	0.0262
	0.0321	0.0382	0.0446	0.0510	0.0577
	0.0644	0.0713	0.0785	0.0859	0.0948
	0.1052	0.1166	0.1301	0.1453	0.1609
	0.1788	0.1999	0.2222	0.2472	0.2749
	0.3041	0.3349	0.3668	0.3994	0.4328
	0.4667	0.5010	0.5356	0.5708	0.6063
	0.6424	0.6789	0.7159	0.7531	0.7909
	0.8302	0.8710	0.9132	0.9565	1.0000
Hrad:					
	0.0221	0.0452	0.0672	0.0952	0.1062
	0.1084	0.1324	0.1572	0.1675	0.2000
	0.2300	0.2668	0.3026	0.3393	0.3761
	0.4120	0.4424	0.4705	0.4969	0.4126
	0.4249	0.4342	0.3809	0.4124	0.4453
	0.3854	0.3987	0.4276	0.4043	0.4197
	0.4458	0.4639	0.4952	0.5255	0.5621
	0.5943	0.6336	0.6731	0.7039	0.7384
	0.7707	0.8053	0.8412	0.8787	0.9139
	0.9455	0.9744	0.9969	0.9592	1.0000
width:					
	0.0101	0.0189	0.0294	0.0356	0.0514
	0.0742	0.0874	0.0995	0.1232	0.1310
	0.1396	0.1434	0.1474	0.1506	0.1535
	0.1566	0.1615	0.1670	0.1736	0.2301
	0.2480	0.2796	0.3421	0.3528	0.3617
	0.4645	0.5022	0.5264	0.6123	0.6557
	0.6831	0.7229	0.7416	0.7610	0.7708
	0.7860	0.7914	0.7964	0.8114	0.8215
	0.8339	0.8435	0.8513	0.8572	0.8824
	0.9227	0.9521	0.9827	0.9973	1.0000
Transect 1_9					
Area:					
	0.0002	0.0007	0.0014	0.0041	0.0075
	0.0116	0.0178	0.0270	0.0378	0.0497
	0.0624	0.0760	0.0912	0.1072	0.1243
	0.1422	0.1611	0.1808	0.2008	0.2214
	0.2423	0.2637	0.2856	0.3079	0.3308
	0.3542	0.3781	0.4026	0.4276	0.4533
	0.4794	0.5058	0.5324	0.5590	0.5858
	0.6126	0.6395	0.6665	0.6936	0.7207
	0.7480	0.7755	0.8030	0.8307	0.8586
	0.8866	0.9146	0.9429	0.9713	1.0000
Hrad:					
	0.0153	0.0358	0.0375	0.0352	0.0600
	0.0745	0.0761	0.0883	0.1061	0.1270
	0.1471	0.1674	0.1831	0.1993	0.2175
	0.2320	0.2499	0.2622	0.2844	0.3081
	0.3301	0.3508	0.3719	0.3927	0.4124
	0.4316	0.4501	0.4678	0.4856	0.5045
	0.5249	0.5507	0.5768	0.6028	0.6298
	0.6567	0.6836	0.7104	0.7361	0.7616
	0.7872	0.8122	0.8366	0.8605	0.8849
	0.9100	0.9349	0.9568	0.9787	1.0000
width:					
	0.0139	0.0193	0.0366	0.1157	0.1260
	0.1694	0.2682	0.3502	0.3980	0.4288

			Untitled		
	0.4555	0.4992	0.5440	0.5748	0.6070
	0.6429	0.6710	0.6905	0.7074	0.7198
	0.7352	0.7530	0.7691	0.7856	0.8034
	0.8220	0.8414	0.8621	0.8822	0.9000
	0.9150	0.9200	0.9243	0.9286	0.9314
	0.9340	0.9366	0.9392	0.9431	0.9472
	0.9509	0.9554	0.9605	0.9658	0.9706
	0.9746	0.9785	0.9856	0.9926	1.0000
Transect 2_1					
Area:	0.0013	0.0039	0.0074	0.0120	0.0174
	0.0235	0.0305	0.0382	0.0468	0.0562
	0.0667	0.0781	0.0907	0.1042	0.1190
	0.1353	0.1532	0.1729	0.1935	0.2144
	0.2358	0.2575	0.2795	0.3019	0.3247
	0.3480	0.3715	0.3952	0.4194	0.4438
	0.4686	0.4937	0.5191	0.5449	0.5709
	0.5972	0.6240	0.6510	0.6782	0.7059
	0.7339	0.7621	0.7907	0.8197	0.8490
	0.8786	0.9085	0.9389	0.9694	1.0000
Hrad:					
	0.0209	0.0387	0.0564	0.0744	0.0932
	0.1097	0.1291	0.1429	0.1621	0.1715
	0.1874	0.1985	0.2157	0.2257	0.2384
	0.2408	0.2476	0.2595	0.2868	0.3124
	0.3361	0.3607	0.3870	0.4097	0.4325
	0.4573	0.4832	0.5084	0.5298	0.5536
	0.5758	0.6006	0.6238	0.6468	0.6713
	0.6877	0.7124	0.7372	0.7593	0.7775
	0.8033	0.8202	0.8439	0.8634	0.8867
	0.9061	0.9249	0.9469	0.9735	1.0000
Width:					
	0.0655	0.1008	0.1319	0.1616	0.1865
	0.2147	0.2364	0.2678	0.2889	0.3278
	0.3564	0.3939	0.4208	0.4620	0.4995
	0.5622	0.6193	0.6667	0.6751	0.6869
	0.7020	0.7143	0.7228	0.7374	0.7513
	0.7614	0.7691	0.7778	0.7919	0.8020
	0.8143	0.8224	0.8325	0.8427	0.8506
	0.8687	0.8761	0.8833	0.8934	0.9082
	0.9137	0.9293	0.9372	0.9495	0.9576
	0.9697	0.9823	0.9916	0.9958	1.0000
Transect 2_10					
Area:	0.0005	0.0017	0.0037	0.0060	0.0087
	0.0118	0.0155	0.0196	0.0242	0.0293
	0.0351	0.0416	0.0489	0.0588	0.0700
	0.0828	0.0969	0.1128	0.1306	0.1504
	0.1720	0.1951	0.2194	0.2443	0.2697
	0.2952	0.3210	0.3470	0.3732	0.3996
	0.4261	0.4529	0.4798	0.5069	0.5343
	0.5618	0.5895	0.6174	0.6456	0.6740
	0.7027	0.7318	0.7611	0.7909	0.8212
	0.8522	0.8849	0.9208	0.9593	1.0000
Hrad:					
	0.0239	0.0437	0.0696	0.0976	0.1261
	0.1473	0.1648	0.1873	0.2071	0.2245
	0.2356	0.2533	0.2511	0.2267	0.2442
	0.2566	0.2696	0.2839	0.2867	0.3037
	0.3185	0.3406	0.3687	0.4040	0.4400
	0.4788	0.5158	0.5523	0.5898	0.6271

			Untitled		
	0.6645	0.7014	0.7375	0.7734	0.8095
	0.8452	0.8804	0.9156	0.9492	0.9802
	1.0099	1.0420	1.0705	1.0942	1.1120
	1.1304	1.0854	1.0209	1.0091	1.0000
width:					
	0.0195	0.0394	0.0524	0.0617	0.0693
	0.0803	0.0937	0.1044	0.1164	0.1302
	0.1486	0.1638	0.1945	0.2591	0.2866
	0.3225	0.3594	0.3970	0.4554	0.4951
	0.5400	0.5729	0.5950	0.6047	0.6128
	0.6165	0.6222	0.6281	0.6326	0.6370
	0.6411	0.6455	0.6504	0.6552	0.6598
	0.6645	0.6694	0.6741	0.6798	0.6873
	0.6956	0.7020	0.7107	0.7226	0.7383
	0.7536	0.8151	0.9019	0.9506	1.0000
Transect 2_11					
Area:	0.0009	0.0029	0.0060	0.0101	0.0150
	0.0205	0.0268	0.0337	0.0412	0.0492
	0.0576	0.0664	0.0757	0.0856	0.0963
	0.1076	0.1196	0.1323	0.1456	0.1594
	0.1738	0.1888	0.2046	0.2212	0.2387
	0.2570	0.2760	0.2961	0.3172	0.3392
	0.3623	0.3867	0.4121	0.4385	0.4659
	0.4943	0.5234	0.5533	0.5842	0.6160
	0.6488	0.6829	0.7182	0.7545	0.7927
	0.8329	0.8738	0.9152	0.9573	1.0000
Hrad:					
	0.0262	0.0516	0.0740	0.0932	0.1240
	0.1506	0.1759	0.2008	0.2285	0.2583
	0.2882	0.3165	0.3424	0.3569	0.3764
	0.3974	0.4184	0.4383	0.4635	0.4883
	0.5081	0.5277	0.5489	0.5608	0.5827
	0.6038	0.6218	0.6415	0.6612	0.6804
	0.6950	0.7068	0.7281	0.7458	0.7659
	0.7867	0.8102	0.8278	0.8501	0.8695
	0.8839	0.9018	0.9210	0.9345	0.9364
	0.8835	0.9150	0.9457	0.9736	1.0000
width:					
	0.0343	0.0569	0.0807	0.1081	0.1210
	0.1364	0.1523	0.1677	0.1803	0.1904
	0.1998	0.2098	0.2210	0.2398	0.2558
	0.2709	0.2859	0.3018	0.3141	0.3263
	0.3419	0.3578	0.3735	0.3975	0.4146
	0.4320	0.4540	0.4776	0.4990	0.5229
	0.5506	0.5797	0.6007	0.6242	0.6471
	0.6666	0.6838	0.7067	0.7261	0.7481
	0.7749	0.8056	0.8292	0.8619	0.9079
	0.9427	0.9548	0.9677	0.9832	1.0000
Transect 2_12					
Area:	0.0011	0.0034	0.0069	0.0110	0.0157
	0.0211	0.0269	0.0334	0.0406	0.0484
	0.0570	0.0662	0.0762	0.0867	0.0978
	0.1093	0.1216	0.1343	0.1475	0.1613
	0.1756	0.1902	0.2053	0.2211	0.2377
	0.2552	0.2734	0.2924	0.3123	0.3328
	0.3540	0.3761	0.3992	0.4233	0.4482
	0.4740	0.5007	0.5285	0.5581	0.5889
	0.6207	0.6533	0.6870	0.7237	0.7659
	0.8096	0.8549	0.9013	0.9492	1.0000

Untitled

Hrad:

0.0302	0.0593	0.0935	0.1287	0.1613
0.1954	0.2260	0.2534	0.2820	0.3064
0.3302	0.3565	0.3845	0.4159	0.4474
0.4767	0.5026	0.5351	0.5658	0.5958
0.6275	0.6615	0.6917	0.7067	0.7205
0.7407	0.7588	0.7787	0.8011	0.8273
0.8444	0.8610	0.8765	0.8960	0.9131
0.9332	0.9543	0.9543	0.9523	0.9739
0.9988	1.0212	1.0307	1.0330	0.9178
0.9355	0.9707	0.9910	0.9973	1.0000

width:

0.0341	0.0563	0.0715	0.0831	0.0951
0.1050	0.1160	0.1285	0.1401	0.1537
0.1679	0.1808	0.1928	0.2029	0.2126
0.2232	0.2353	0.2442	0.2536	0.2633
0.2721	0.2796	0.2886	0.3042	0.3209
0.3350	0.3504	0.3652	0.3791	0.3912
0.4078	0.4249	0.4430	0.4595	0.4775
0.4942	0.5105	0.5388	0.5703	0.5885
0.6047	0.6226	0.6486	0.7279	0.8116
0.8413	0.8557	0.8834	0.9241	1.0000

Transect 2_13

Area:

0.0008	0.0027	0.0051	0.0085	0.0133
0.0196	0.0272	0.0360	0.0456	0.0559
0.0668	0.0783	0.0903	0.1029	0.1160
0.1297	0.1440	0.1588	0.1743	0.1903
0.2070	0.2245	0.2426	0.2612	0.2806
0.3008	0.3217	0.3433	0.3656	0.3888
0.4128	0.4380	0.4642	0.4914	0.5195
0.5483	0.5776	0.6076	0.6381	0.6690
0.7003	0.7322	0.7644	0.7970	0.8300
0.8634	0.8971	0.9312	0.9655	1.0000

Hrad:

0.0174	0.0435	0.0644	0.0754	0.0816
0.0985	0.1149	0.1371	0.1590	0.1844
0.2078	0.2327	0.2562	0.2802	0.3021
0.3242	0.3455	0.3661	0.3867	0.4054
0.4234	0.4407	0.4604	0.4813	0.4931
0.5117	0.5292	0.5468	0.5604	0.5753
0.5863	0.5958	0.6067	0.6176	0.6365
0.6579	0.6796	0.6998	0.7233	0.7476
0.7696	0.7928	0.8187	0.8437	0.8666
0.8908	0.9155	0.9409	0.9705	1.0000

width:

0.0456	0.0618	0.0808	0.1139	0.1647
0.2013	0.2395	0.2655	0.2900	0.3067
0.3251	0.3401	0.3564	0.3712	0.3882
0.4044	0.4212	0.4384	0.4553	0.4744
0.4942	0.5147	0.5325	0.5485	0.5751
0.5941	0.6143	0.6344	0.6593	0.6830
0.7117	0.7430	0.7733	0.8042	0.8245
0.8412	0.8572	0.8751	0.8885	0.9006
0.9153	0.9283	0.9379	0.9483	0.9608
0.9718	0.9818	0.9911	0.9955	1.0000

Transect 2_14

Area:

0.0005	0.0019	0.0037	0.0060	0.0089
0.0125	0.0168	0.0220	0.0284	0.0360
0.0446	0.0547	0.0658	0.0778	0.0907

Untitled

Hrad:

0.1043	0.1186	0.1336	0.1494	0.1660
0.1833	0.2013	0.2198	0.2390	0.2588
0.2793	0.3004	0.3222	0.3448	0.3680
0.3919	0.4166	0.4420	0.4681	0.4949
0.5226	0.5510	0.5802	0.6103	0.6415
0.6739	0.7069	0.7409	0.7756	0.8115
0.8480	0.8851	0.9229	0.9613	1.0000

Hrad:

0.0221	0.0455	0.0703	0.0898	0.1075
0.1240	0.1391	0.1471	0.1580	0.1744
0.1860	0.1999	0.2216	0.2444	0.2678
0.2922	0.3165	0.3376	0.3603	0.3836
0.4064	0.4310	0.4554	0.4792	0.5029
0.5245	0.5473	0.5677	0.5880	0.6106
0.6310	0.6498	0.6711	0.6915	0.7096
0.7281	0.7490	0.7648	0.7790	0.7875
0.8069	0.8208	0.8438	0.8578	0.8736
0.8975	0.9202	0.9424	0.9691	1.0000

width:

0.0248	0.0413	0.0529	0.0671	0.0834
0.1013	0.1215	0.1500	0.1808	0.2073
0.2413	0.2749	0.2985	0.3201	0.3405
0.3588	0.3767	0.3979	0.4171	0.4353
0.4536	0.4696	0.4853	0.5015	0.5174
0.5353	0.5518	0.5706	0.5895	0.6059
0.6245	0.6446	0.6621	0.6805	0.7013
0.7216	0.7396	0.7627	0.7877	0.8191
0.8393	0.8651	0.8813	0.9071	0.9314
0.9468	0.9634	0.9804	0.9925	1.0000

Transect 2_15

Area:

0.0002	0.0013	0.0033	0.0056	0.0081
0.0110	0.0146	0.0197	0.0266	0.0353
0.0459	0.0575	0.0702	0.0841	0.0991
0.1154	0.1326	0.1504	0.1690	0.1882
0.2080	0.2282	0.2489	0.2700	0.2915
0.3134	0.3358	0.3586	0.3818	0.4054
0.4294	0.4537	0.4785	0.5037	0.5293
0.5554	0.5819	0.6091	0.6367	0.6650
0.6943	0.7248	0.7563	0.7888	0.8221
0.8562	0.8909	0.9265	0.9630	1.0000

Hrad:

0.0184	0.0301	0.0575	0.0872	0.1134
0.1280	0.1306	0.1205	0.1266	0.1362
0.1538	0.1769	0.1972	0.2164	0.2364
0.2569	0.2817	0.3080	0.3336	0.3599
0.3869	0.4158	0.4445	0.4723	0.4994
0.5267	0.5539	0.5810	0.6078	0.6352
0.6627	0.6894	0.7134	0.7383	0.7624
0.7858	0.8074	0.8273	0.8505	0.8606
0.8681	0.8700	0.8811	0.8927	0.9080
0.9276	0.9440	0.9574	0.9739	1.0000

width:

0.0113	0.0466	0.0577	0.0638	0.0710
0.0854	0.1112	0.1632	0.2104	0.2654
0.2990	0.3255	0.3566	0.3891	0.4199
0.4497	0.4713	0.4891	0.5073	0.5237
0.5382	0.5496	0.5606	0.5723	0.5844
0.5958	0.6070	0.6179	0.6288	0.6388
0.6484	0.6586	0.6711	0.6827	0.6947
0.7072	0.7212	0.7367	0.7491	0.7733
0.8003	0.8338	0.8591	0.8843	0.9062

	0.9238	0.9445	Untitled 0.9686	0.9893	1.0000
Transect 2_16					
Area:	0.0018	0.0057	0.0109	0.0176	0.0255
	0.0345	0.0448	0.0562	0.0691	0.0832
	0.0989	0.1156	0.1332	0.1518	0.1712
	0.1914	0.2121	0.2333	0.2547	0.2763
	0.2981	0.3202	0.3424	0.3647	0.3872
	0.4099	0.4328	0.4559	0.4791	0.5024
	0.5259	0.5495	0.5733	0.5973	0.6214
	0.6457	0.6701	0.6946	0.7193	0.7441
	0.7690	0.7941	0.8194	0.8448	0.8703
	0.8959	0.9217	0.9476	0.9738	1.0000
Hrad:	0.0160	0.0319	0.0485	0.0638	0.0791
	0.0944	0.1089	0.1217	0.1351	0.1461
	0.1599	0.1770	0.1938	0.2109	0.2263
	0.2459	0.2669	0.2881	0.3115	0.3350
	0.3579	0.3810	0.4043	0.4278	0.4510
	0.4731	0.4960	0.5190	0.5423	0.5654
	0.5872	0.6091	0.6311	0.6541	0.6769
	0.6987	0.7205	0.7427	0.7649	0.7874
	0.8095	0.8298	0.8515	0.8737	0.8956
	0.9171	0.9379	0.9578	0.9789	1.0000
width:	0.1152	0.1772	0.2249	0.2754	0.3219
	0.3655	0.4111	0.4623	0.5113	0.5693
	0.6185	0.6529	0.6878	0.7198	0.7566
	0.7785	0.7950	0.8100	0.8179	0.8251
	0.8330	0.8404	0.8470	0.8527	0.8588
	0.8666	0.8727	0.8785	0.8834	0.8887
	0.8956	0.9023	0.9086	0.9133	0.9181
	0.9242	0.9301	0.9353	0.9404	0.9450
	0.9500	0.9570	0.9623	0.9669	0.9717
	0.9769	0.9828	0.9894	0.9947	1.0000
Transect 2_17					
Area:	0.0014	0.0045	0.0089	0.0143	0.0206
	0.0280	0.0363	0.0457	0.0559	0.0672
	0.0793	0.0923	0.1062	0.1208	0.1361
	0.1521	0.1689	0.1863	0.2043	0.2230
	0.2423	0.2621	0.2824	0.3033	0.3246
	0.3465	0.3690	0.3919	0.4153	0.4391
	0.4633	0.4881	0.5133	0.5390	0.5650
	0.5915	0.6185	0.6459	0.6738	0.7021
	0.7308	0.7598	0.7891	0.8186	0.8484
	0.8784	0.9086	0.9389	0.9694	1.0000
Hrad:	0.0186	0.0365	0.0558	0.0756	0.0921
	0.1102	0.1257	0.1431	0.1601	0.1757
	0.1939	0.2108	0.2285	0.2483	0.2673
	0.2844	0.3034	0.3236	0.3420	0.3605
	0.3806	0.4009	0.4213	0.4418	0.4607
	0.4795	0.4995	0.5200	0.5410	0.5609
	0.5803	0.6001	0.6195	0.6404	0.6603
	0.6795	0.6993	0.7172	0.7356	0.7557
	0.7769	0.8009	0.8245	0.8460	0.8712
	0.8966	0.9229	0.9490	0.9746	1.0000
width:	0.0763	0.1241	0.1601	0.1891	0.2240
	0.2541	0.2889	0.3192	0.3494	0.3825

	0.4093	0.4380	Untitled 0.4648	0.4868	0.5093
	0.5351	0.5569	0.5758	0.5976	0.6187
	0.6366	0.6538	0.6704	0.6865	0.7047
	0.7229	0.7387	0.7537	0.7676	0.7829
	0.7985	0.8134	0.8286	0.8416	0.8557
	0.8706	0.8845	0.9006	0.9160	0.9291
	0.9407	0.9487	0.9570	0.9677	0.9739
	0.9797	0.9845	0.9894	0.9947	1.0000
Transect 2_18					
Area:	0.0007	0.0019	0.0034	0.0051	0.0071
	0.0091	0.0114	0.0138	0.0163	0.0189
	0.0217	0.0246	0.0277	0.0312	0.0351
	0.0394	0.0442	0.0497	0.0564	0.0658
	0.0778	0.0926	0.1094	0.1280	0.1483
	0.1703	0.1942	0.2199	0.2476	0.2768
	0.3075	0.3393	0.3718	0.4049	0.4386
	0.4728	0.5074	0.5425	0.5780	0.6140
	0.6504	0.6873	0.7246	0.7625	0.8008
	0.8396	0.8790	0.9188	0.9592	1.0000
Hrad:	0.0279	0.0552	0.0869	0.1160	0.1434
	0.1725	0.2016	0.2298	0.2571	0.2836
	0.3095	0.3348	0.3598	0.3853	0.4127
	0.3529	0.3534	0.3443	0.2889	0.2499
	0.2370	0.2378	0.2531	0.2705	0.2873
	0.3053	0.3216	0.3373	0.3565	0.3789
	0.4037	0.4314	0.4653	0.4980	0.5306
	0.5639	0.5977	0.6318	0.6635	0.6967
	0.7288	0.7609	0.7912	0.8220	0.8535
	0.8823	0.9115	0.9410	0.9706	1.0000
width:	0.0242	0.0345	0.0393	0.0441	0.0490
	0.0527	0.0560	0.0593	0.0627	0.0660
	0.0693	0.0726	0.0807	0.0895	0.0985
	0.1105	0.1239	0.1432	0.1643	0.1893
	0.3276	0.3886	0.4316	0.4725	0.5157
	0.5575	0.6034	0.6516	0.6941	0.7303
	0.7615	0.7863	0.7989	0.8130	0.8264
	0.8382	0.8488	0.8585	0.8710	0.8812
	0.8923	0.9032	0.9158	0.9276	0.9382
	0.9515	0.9643	0.9764	0.9882	1.0000
Transect 2_19					
Area:	0.0013	0.0030	0.0050	0.0071	0.0095
	0.0121	0.0148	0.0177	0.0208	0.0240
	0.0273	0.0308	0.0344	0.0381	0.0421
	0.0462	0.0505	0.0550	0.0598	0.0650
	0.0708	0.0774	0.0852	0.0944	0.1059
	0.1206	0.1406	0.1659	0.1943	0.2247
	0.2558	0.2877	0.3203	0.3537	0.3880
	0.4230	0.4589	0.4956	0.5331	0.5714
	0.6105	0.6504	0.6912	0.7328	0.7753
	0.8186	0.8627	0.9076	0.9534	1.0000
Hrad:	0.0386	0.0776	0.1130	0.1467	0.1799
	0.2131	0.2459	0.2775	0.3098	0.3419
	0.3732	0.4039	0.4339	0.4594	0.4840
	0.5084	0.5327	0.5527	0.5611	0.5568
	0.5332	0.5014	0.4719	0.4312	0.3836
	0.3347	0.2776	0.2893	0.3067	0.3436

			Untitled		
	0.3813	0.4193	0.4558	0.4914	0.5261
	0.5602	0.5945	0.6284	0.6615	0.6942
	0.7259	0.7579	0.7889	0.8196	0.8503
	0.8802	0.9110	0.9416	0.9705	1.0000
width:	0.0339	0.0388	0.0438	0.0485	0.0527
	0.0564	0.0599	0.0633	0.0665	0.0694
	0.0724	0.0753	0.0783	0.0820	0.0859
	0.0898	0.0937	0.0983	0.1053	0.1153
	0.1314	0.1531	0.1792	0.2177	0.2748
	0.3593	0.5058	0.5730	0.6332	0.6532
	0.6703	0.6856	0.7022	0.7194	0.7371
	0.7548	0.7717	0.7884	0.8056	0.8228
	0.8408	0.8579	0.8759	0.8940	0.9116
	0.9299	0.9469	0.9639	0.9823	1.0000
Transect 2_2					
Area:	0.0171	0.0343	0.0519	0.0696	0.0874
	0.1054	0.1235	0.1418	0.1602	0.1786
	0.1971	0.2158	0.2345	0.2534	0.2725
	0.2916	0.3107	0.3300	0.3494	0.3689
	0.3886	0.4084	0.4282	0.4481	0.4681
	0.4883	0.5086	0.5291	0.5495	0.5701
	0.5908	0.6116	0.6326	0.6536	0.6746
	0.6958	0.7171	0.7384	0.7599	0.7814
	0.8029	0.8246	0.8463	0.8681	0.8899
	0.9118	0.9338	0.9558	0.9779	1.0000
Hrad:	0.0221	0.0435	0.0653	0.0867	0.1080
	0.1294	0.1503	0.1711	0.1927	0.2142
	0.2351	0.2556	0.2756	0.2958	0.3164
	0.3375	0.3585	0.3779	0.3970	0.4165
	0.4363	0.4570	0.4776	0.4967	0.5150
	0.5337	0.5526	0.5730	0.5932	0.6123
	0.6304	0.6480	0.6666	0.6885	0.7077
	0.7250	0.7447	0.7644	0.7841	0.8034
	0.8228	0.8423	0.8615	0.8808	0.9000
	0.9198	0.9399	0.9600	0.9800	1.0000
width:	0.7727	0.7901	0.7953	0.8025	0.8097
	0.8150	0.8222	0.8288	0.8315	0.8342
	0.8387	0.8442	0.8513	0.8568	0.8612
	0.8640	0.8668	0.8733	0.8802	0.8860
	0.8909	0.8938	0.8967	0.9023	0.9091
	0.9150	0.9205	0.9235	0.9265	0.9312
	0.9373	0.9440	0.9490	0.9494	0.9534
	0.9598	0.9629	0.9661	0.9692	0.9727
	0.9758	0.9790	0.9824	0.9856	0.9888
	0.9914	0.9935	0.9957	0.9978	1.0000
Transect 2_20					
Area:	0.0009	0.0024	0.0043	0.0065	0.0089
	0.0116	0.0144	0.0174	0.0206	0.0240
	0.0275	0.0312	0.0351	0.0392	0.0434
	0.0478	0.0523	0.0570	0.0619	0.0669
	0.0722	0.0777	0.0834	0.0895	0.0960
	0.1033	0.1116	0.1233	0.1387	0.1573
	0.1813	0.2095	0.2411	0.2752	0.3098
	0.3451	0.3809	0.4177	0.4558	0.4954
	0.5369	0.5805	0.6273	0.6775	0.7290
	0.7816	0.8350	0.8892	0.9442	1.0000

			Untitled		
Hrad:	0.0384	0.0778	0.1158	0.1538	0.1963
	0.2367	0.2763	0.3144	0.3507	0.3867
	0.4218	0.4574	0.4929	0.5277	0.5637
	0.5986	0.6310	0.6631	0.6941	0.7210
	0.7480	0.7730	0.7928	0.7903	0.7813
	0.7490	0.6648	0.5197	0.4589	0.4255
	0.3882	0.3913	0.4066	0.4486	0.4976
	0.5449	0.5899	0.6277	0.6594	0.6863
	0.7098	0.7228	0.7248	0.7462	0.7841
	0.8285	0.8714	0.9139	0.9565	1.0000
width:	0.0226	0.0304	0.0367	0.0420	0.0454
	0.0487	0.0519	0.0551	0.0584	0.0616
	0.0648	0.0679	0.0708	0.0737	0.0764
	0.0792	0.0822	0.0852	0.0884	0.0920
	0.0957	0.0996	0.1043	0.1123	0.1220
	0.1370	0.1671	0.2365	0.3015	0.3691
	0.4664	0.5349	0.5926	0.6130	0.6222
	0.6329	0.6454	0.6651	0.6908	0.7216
	0.7561	0.8030	0.8654	0.9079	0.9297
	0.9434	0.9582	0.9729	0.9872	1.0000
Transect 2_21					
Area:	0.0025	0.0053	0.0085	0.0119	0.0155
	0.0192	0.0231	0.0271	0.0313	0.0356
	0.0401	0.0447	0.0494	0.0543	0.0592
	0.0643	0.0695	0.0748	0.0802	0.0858
	0.0915	0.0980	0.1071	0.1188	0.1333
	0.1506	0.1707	0.1955	0.2258	0.2566
	0.2874	0.3183	0.3494	0.3809	0.4128
	0.4453	0.4783	0.5118	0.5458	0.5806
	0.6161	0.6523	0.6895	0.7278	0.7674
	0.8085	0.8516	0.8972	0.9465	1.0000
Hrad:	0.0523	0.0989	0.1455	0.1917	0.2372
	0.2833	0.3281	0.3715	0.4139	0.4553
	0.4963	0.5364	0.5758	0.6172	0.6583
	0.6987	0.7386	0.7779	0.8145	0.8504
	0.8858	0.9117	0.9118	0.8944	0.8623
	0.8191	0.7813	0.6457	0.4144	0.4690
	0.5235	0.5779	0.6290	0.6757	0.7212
	0.7638	0.8108	0.8535	0.8924	0.9316
	0.9661	1.0018	1.0292	1.0531	1.0714
	1.0886	1.0838	1.0673	1.0400	1.0000
width:	0.0473	0.0538	0.0584	0.0620	0.0652
	0.0677	0.0702	0.0728	0.0753	0.0778
	0.0803	0.0828	0.0852	0.0873	0.0892
	0.0912	0.0932	0.0952	0.0974	0.0997
	0.1029	0.1358	0.1844	0.2328	0.2811
	0.3313	0.3837	0.5053	0.5442	0.5461
	0.5480	0.5500	0.5546	0.5627	0.5715
	0.5822	0.5891	0.5987	0.6108	0.6224
	0.6369	0.6504	0.6692	0.6904	0.7156
	0.7422	0.7853	0.8403	0.9100	1.0000
Transect 2_22					
Area:	0.0007	0.0018	0.0031	0.0048	0.0066
	0.0087	0.0110	0.0138	0.0210	0.0370
	0.0545	0.0721	0.0899	0.1079	0.1260

			Untitled		
	0.1443	0.1630	0.1820	0.2013	0.2209
	0.2410	0.2615	0.2823	0.3036	0.3251
	0.3469	0.3692	0.3919	0.4149	0.4385
	0.4625	0.4870	0.5119	0.5373	0.5632
	0.5896	0.6164	0.6435	0.6710	0.6990
	0.7273	0.7561	0.7852	0.8148	0.8447
Hrad:	0.8750	0.9057	0.9368	0.9682	1.0000
	0.0235	0.0453	0.0667	0.0872	0.1075
	0.1260	0.1431	0.1012	0.0771	0.0676
	0.0988	0.1299	0.1607	0.1910	0.2208
	0.2486	0.2764	0.3027	0.3300	0.3539
	0.3787	0.4042	0.4286	0.4533	0.4787
	0.5011	0.5250	0.5465	0.5683	0.5881
	0.6086	0.6281	0.6487	0.6688	0.6901
	0.7071	0.7283	0.7517	0.7719	0.7918
	0.8121	0.8347	0.8529	0.8744	0.8940
width:	0.9152	0.9360	0.9569	0.9765	1.0000
	0.0289	0.0388	0.0469	0.0543	0.0612
	0.0685	0.0764	0.1359	0.3619	0.5471
	0.5514	0.5553	0.5594	0.5645	0.5704
	0.5805	0.5896	0.6011	0.6099	0.6241
	0.6365	0.6469	0.6587	0.6696	0.6789
	0.6923	0.7032	0.7170	0.7300	0.7456
	0.7598	0.7753	0.7892	0.8034	0.8161
	0.8338	0.8463	0.8561	0.8693	0.8827
	0.8956	0.9058	0.9206	0.9318	0.9449
	0.9561	0.9676	0.9790	0.9916	1.0000
Transect 2_23					
Area:	0.0003	0.0009	0.0017	0.0027	0.0038
	0.0050	0.0063	0.0078	0.0097	0.0123
	0.0155	0.0201	0.0362	0.0542	0.0725
	0.0912	0.1103	0.1300	0.1501	0.1708
	0.1920	0.2137	0.2359	0.2586	0.2817
	0.3056	0.3298	0.3545	0.3798	0.4056
	0.4320	0.4588	0.4861	0.5139	0.5420
	0.5706	0.5995	0.6286	0.6581	0.6878
	0.7178	0.7480	0.7784	0.8092	0.8403
Hrad:	0.8716	0.9033	0.9352	0.9675	1.0000
	0.0185	0.0402	0.0643	0.0863	0.1069
	0.1261	0.1443	0.1542	0.1409	0.1393
	0.1422	0.1191	0.0661	0.0976	0.1281
	0.1585	0.1859	0.2136	0.2401	0.2671
	0.2922	0.3186	0.3436	0.3694	0.3926
	0.4165	0.4403	0.4640	0.4856	0.5094
	0.5304	0.5551	0.5769	0.6013	0.6251
	0.6489	0.6764	0.7022	0.7274	0.7536
	0.7805	0.8064	0.8315	0.8553	0.8808
width:	0.9066	0.9289	0.9525	0.9780	1.0000
	0.0158	0.0230	0.0270	0.0309	0.0348
	0.0390	0.0432	0.0500	0.0685	0.0875
	0.1081	0.3038	0.5472	0.5552	0.5661
	0.5754	0.5931	0.6083	0.6251	0.6394
	0.6571	0.6707	0.6866	0.7001	0.7175
	0.7335	0.7488	0.7641	0.7821	0.7963
	0.8144	0.8265	0.8426	0.8547	0.8671
	0.8794	0.8863	0.8952	0.9047	0.9127
	0.9197	0.9275	0.9362	0.9461	0.9540

	0.9614	0.9724	Untitled		
	0.9614	0.9724	0.9819	0.9892	1.0000
Transect 2_24					
Area:	0.0003	0.0010	0.0019	0.0029	0.0041
	0.0055	0.0070	0.0086	0.0103	0.0122
	0.0143	0.0164	0.0187	0.0211	0.0238
	0.0266	0.0297	0.0333	0.0377	0.0456
	0.0663	0.0897	0.1133	0.1369	0.1607
	0.1847	0.2088	0.2330	0.2575	0.2823
	0.3073	0.3334	0.3612	0.3905	0.4217
	0.4546	0.4886	0.5237	0.5596	0.5966
	0.6346	0.6734	0.7126	0.7523	0.7925
Hrad:	0.8331	0.8742	0.9157	0.9576	1.0000
	0.0229	0.0535	0.0800	0.1089	0.1362
	0.1621	0.1869	0.2106	0.2336	0.2575
	0.2810	0.3041	0.3269	0.3441	0.3584
	0.3736	0.3726	0.3539	0.2986	0.2441
	0.1209	0.1626	0.2041	0.2453	0.2862
	0.3269	0.3670	0.4063	0.4450	0.4826
	0.5193	0.5533	0.5840	0.6121	0.5593
	0.5774	0.6018	0.6275	0.6535	0.6777
	0.7031	0.7351	0.7689	0.8010	0.8363
width:	0.8684	0.9009	0.9354	0.9674	1.0000
	0.0136	0.0184	0.0232	0.0266	0.0298
	0.0331	0.0363	0.0396	0.0430	0.0461
	0.0492	0.0523	0.0554	0.0594	0.0642
	0.0690	0.0774	0.0916	0.1240	0.3187
	0.5478	0.5508	0.5539	0.5571	0.5604
	0.5638	0.5678	0.5725	0.5776	0.5837
	0.5933	0.6339	0.6695	0.7071	0.7533
	0.7866	0.8114	0.8341	0.8560	0.8801
	0.9023	0.9158	0.9266	0.9391	0.9475
	0.9593	0.9703	0.9789	0.9898	1.0000
Transect 2_25					
Area:	0.0001	0.0006	0.0013	0.0023	0.0033
	0.0045	0.0059	0.0073	0.0089	0.0106
	0.0124	0.0143	0.0164	0.0186	0.0210
	0.0235	0.0262	0.0290	0.0321	0.0355
	0.0443	0.0593	0.0796	0.1048	0.1302
	0.1556	0.1811	0.2068	0.2326	0.2587
	0.2851	0.3118	0.3388	0.3661	0.3955
	0.4272	0.4604	0.4949	0.5306	0.5679
	0.6067	0.6465	0.6880	0.7311	0.7748
Hrad:	0.8190	0.8637	0.9088	0.9542	1.0000
	0.0228	0.0455	0.0685	0.1003	0.1316
	0.1609	0.1888	0.2157	0.2417	0.2672
	0.2923	0.3170	0.3398	0.3596	0.3797
	0.4000	0.4179	0.4363	0.4388	0.4347
	0.3558	0.2702	0.1446	0.1898	0.2349
	0.2798	0.3241	0.3677	0.4111	0.4522
	0.4921	0.5318	0.5720	0.6099	0.6373
	0.6012	0.6228	0.6461	0.6687	0.6821
	0.7090	0.7365	0.7389	0.7739	0.8076
width:	0.8463	0.8841	0.9216	0.9604	1.0000
	0.0063	0.0126	0.0189	0.0222	0.0249
	0.0275	0.0302	0.0329	0.0356	0.0383

			Untitled		
	0.0409	0.0435	0.0464	0.0497	0.0531
	0.0564	0.0602	0.0640	0.0705	0.0791
	0.2712	0.3796	0.5492	0.5510	0.5529
	0.5547	0.5575	0.5610	0.5646	0.5707
	0.5779	0.5849	0.5909	0.6117	0.6645
	0.7097	0.7384	0.7652	0.7928	0.8321
	0.8552	0.8775	0.9309	0.9445	0.9593
	0.9678	0.9769	0.9860	0.9936	1.0000
Transect 2_26					
Area:	0.0005	0.0016	0.0029	0.0044	0.0060
	0.0079	0.0099	0.0121	0.0144	0.0168
	0.0194	0.0221	0.0249	0.0278	0.0309
	0.0342	0.0375	0.0410	0.0446	0.0484
	0.0524	0.0565	0.0607	0.0652	0.0702
	0.0764	0.0865	0.1080	0.1395	0.1710
	0.2028	0.2346	0.2666	0.2988	0.3311
	0.3637	0.3965	0.4295	0.4635	0.5008
	0.5412	0.5848	0.6307	0.6788	0.7290
	0.7817	0.8355	0.8900	0.9448	1.0000
Hrad:	0.0304	0.0709	0.1124	0.1503	0.1858
	0.2209	0.2585	0.2946	0.3295	0.3635
	0.3965	0.4289	0.4621	0.4934	0.5243
	0.5548	0.5849	0.6147	0.6442	0.6702
	0.6942	0.7185	0.7393	0.7563	0.6789
	0.6000	0.3380	0.1902	0.2447	0.2990
	0.3530	0.4068	0.4598	0.5122	0.5643
	0.6157	0.6666	0.7153	0.7594	0.7996
	0.8334	0.7234	0.7442	0.7661	0.7865
	0.8111	0.8552	0.9038	0.9527	1.0000
Width:	0.0160	0.0218	0.0252	0.0286	0.0320
	0.0352	0.0376	0.0401	0.0425	0.0450
	0.0474	0.0499	0.0521	0.0545	0.0570
	0.0594	0.0618	0.0642	0.0667	0.0695
	0.0725	0.0755	0.0790	0.0830	0.1002
	0.1242	0.2532	0.5662	0.5685	0.5707
	0.5729	0.5752	0.5783	0.5818	0.5852
	0.5892	0.5933	0.5989	0.6458	0.7000
	0.7575	0.8076	0.8469	0.8855	0.9267
	0.9636	0.9769	0.9847	0.9916	1.0000
Transect 2_27					
Area:	0.0023	0.0055	0.0095	0.0141	0.0194
	0.0256	0.0323	0.0399	0.0482	0.0573
	0.0671	0.0778	0.0893	0.1015	0.1145
	0.1283	0.1428	0.1582	0.1744	0.1915
	0.2093	0.2279	0.2474	0.2677	0.2887
	0.3107	0.3334	0.3568	0.3811	0.4062
	0.4320	0.4586	0.4859	0.5137	0.5417
	0.5700	0.5987	0.6277	0.6570	0.6866
	0.7166	0.7469	0.7775	0.8085	0.8397
	0.8712	0.9030	0.9351	0.9674	1.0000
Hrad:	0.0272	0.0507	0.0724	0.0930	0.1099
	0.1304	0.1472	0.1647	0.1815	0.1989
	0.2134	0.2297	0.2454	0.2644	0.2795
	0.2963	0.3131	0.3274	0.3434	0.3579
	0.3766	0.3914	0.4078	0.4227	0.4400
	0.4537	0.4728	0.4885	0.5059	0.5207

			Untitled		
	0.5403	0.5551	0.5760	0.6019	0.6292
	0.6541	0.6789	0.7051	0.7281	0.7527
	0.7792	0.8012	0.8252	0.8509	0.8758
	0.8998	0.9231	0.9496	0.9763	1.0000
width:	0.0861	0.1093	0.1309	0.1514	0.1768
	0.1961	0.2196	0.2423	0.2656	0.2880
	0.3144	0.3387	0.3639	0.3840	0.4096
	0.4330	0.4562	0.4831	0.5079	0.5350
	0.5559	0.5824	0.6066	0.6332	0.6562
	0.6847	0.7051	0.7305	0.7533	0.7801
	0.7995	0.8261	0.8435	0.8535	0.8609
	0.8715	0.8819	0.8902	0.9023	0.9122
	0.9197	0.9322	0.9423	0.9502	0.9588
	0.9683	0.9782	0.9847	0.9909	1.0000
Transect 2_28					
Area:	0.0002	0.0008	0.0018	0.0030	0.0045
	0.0062	0.0081	0.0101	0.0124	0.0148
	0.0175	0.0203	0.0233	0.0266	0.0300
	0.0336	0.0375	0.0417	0.0463	0.0516
	0.0579	0.0651	0.0734	0.0832	0.0949
	0.1082	0.1233	0.1402	0.1591	0.1798
	0.2024	0.2270	0.2534	0.2818	0.3121
	0.3444	0.3786	0.4148	0.4529	0.4930
	0.5350	0.5791	0.6251	0.6730	0.7229
	0.7748	0.8286	0.8844	0.9416	1.0000
Hrad:	0.0293	0.0585	0.0910	0.1291	0.1675
	0.2038	0.2385	0.2722	0.3050	0.3373
	0.3695	0.4012	0.4325	0.4636	0.4924
	0.5162	0.5348	0.5525	0.5478	0.5197
	0.5028	0.4916	0.4775	0.4527	0.4436
	0.4472	0.4532	0.4568	0.4712	0.4877
	0.5026	0.5217	0.5447	0.5637	0.5852
	0.6083	0.6314	0.6555	0.6807	0.7052
	0.7306	0.7550	0.7825	0.8089	0.8342
	0.8609	0.8898	0.9180	0.9571	1.0000
Width:	0.0068	0.0135	0.0194	0.0235	0.0268
	0.0301	0.0334	0.0367	0.0401	0.0434
	0.0466	0.0499	0.0531	0.0564	0.0599
	0.0641	0.0690	0.0744	0.0834	0.0982
	0.1140	0.1312	0.1525	0.1827	0.2129
	0.2410	0.2710	0.3060	0.3368	0.3679
	0.4020	0.4345	0.4646	0.4992	0.5327
	0.5656	0.5991	0.6323	0.6650	0.6988
	0.7321	0.7668	0.7987	0.8319	0.8665
	0.9000	0.9312	0.9634	0.9839	1.0000
Transect 2_29					
Area:	0.0006	0.0019	0.0037	0.0058	0.0083
	0.0110	0.0141	0.0176	0.0214	0.0255
	0.0300	0.0347	0.0398	0.0453	0.0513
	0.0577	0.0647	0.0725	0.0812	0.0912
	0.1024	0.1151	0.1292	0.1446	0.1614
	0.1796	0.1991	0.2201	0.2424	0.2662
	0.2916	0.3183	0.3465	0.3763	0.4074
	0.4399	0.4739	0.5093	0.5460	0.5841
	0.6235	0.6634	0.7038	0.7447	0.7863
	0.8283	0.8708	0.9134	0.9562	1.0000

Untitled

Hrad:

0.0252	0.0535	0.0831	0.1124	0.1395
0.1647	0.1887	0.2122	0.2371	0.2619
0.2862	0.3101	0.3288	0.3463	0.3629
0.3782	0.3846	0.3893	0.3822	0.3785
0.3759	0.3772	0.3854	0.3965	0.4068
0.4198	0.4330	0.4481	0.4650	0.4774
0.4927	0.5117	0.5276	0.5449	0.5647
0.5851	0.6028	0.6237	0.6443	0.6637
0.6943	0.7292	0.7636	0.7963	0.8306
0.8648	0.9044	0.9445	0.9764	1.0000

width:

0.0237	0.0357	0.0445	0.0516	0.0589
0.0667	0.0745	0.0825	0.0897	0.0968
0.1039	0.1110	0.1200	0.1298	0.1401
0.1514	0.1671	0.1849	0.2113	0.2397
0.2714	0.3042	0.3343	0.3639	0.3959
0.4269	0.4591	0.4905	0.5207	0.5570
0.5913	0.6217	0.6564	0.6902	0.7213
0.7518	0.7860	0.8165	0.8474	0.8801
0.8980	0.9097	0.9216	0.9353	0.9466
0.9579	0.9628	0.9669	0.9792	1.0000

Transect 2_3

Area:

0.0001	0.0005	0.0011	0.0018	0.0027
0.0038	0.0050	0.0064	0.0080	0.0098
0.0120	0.0144	0.0169	0.0198	0.0229
0.0262	0.0297	0.0334	0.0372	0.0413
0.0457	0.0511	0.0602	0.0729	0.0893
0.1104	0.1360	0.1683	0.2044	0.2408
0.2774	0.3141	0.3508	0.3877	0.4246
0.4617	0.4989	0.5362	0.5736	0.6111
0.6487	0.6864	0.7243	0.7624	0.8008
0.8395	0.8786	0.9181	0.9584	1.0000

Hrad:

0.0223	0.0456	0.0730	0.0984	0.1219
0.1461	0.1698	0.1892	0.2098	0.2225
0.2320	0.2573	0.2822	0.2946	0.3196
0.3456	0.3711	0.3929	0.4184	0.4340
0.4440	0.4526	0.4327	0.4124	0.3634
0.3237	0.2722	0.2373	0.2523	0.2951
0.3390	0.3829	0.4266	0.4703	0.5138
0.5567	0.5998	0.6428	0.6857	0.7280
0.7706	0.8132	0.8555	0.8971	0.9388
0.9801	1.0210	1.0604	1.0979	1.0000

width:

0.0056	0.0109	0.0145	0.0182	0.0221
0.0257	0.0293	0.0337	0.0381	0.0440
0.0514	0.0556	0.0598	0.0669	0.0714
0.0756	0.0797	0.0846	0.0887	0.0949
0.1026	0.1476	0.2515	0.3210	0.4280
0.5186	0.6470	0.7965	0.8103	0.8163
0.8184	0.8204	0.8224	0.8245	0.8265
0.8295	0.8319	0.8342	0.8365	0.8395
0.8418	0.8442	0.8488	0.8548	0.8604
0.8683	0.8782	0.8886	0.9121	1.0000

Transect 2_30

Area:

0.0007	0.0018	0.0034	0.0052	0.0074
0.0099	0.0128	0.0162	0.0200	0.0242
0.0289	0.0340	0.0397	0.0459	0.0527

Untitled

Hrad:

0.0600	0.0679	0.0764	0.0857	0.0959
0.1072	0.1194	0.1326	0.1468	0.1622
0.1789	0.1968	0.2161	0.2367	0.2588
0.2822	0.3070	0.3333	0.3610	0.3901
0.4204	0.4521	0.4854	0.5200	0.5561
0.5937	0.6328	0.6735	0.7158	0.7598
0.8053	0.8523	0.9006	0.9499	1.0000

width:

0.0366	0.0684	0.1003	0.1294	0.1560
0.1813	0.2068	0.2264	0.2469	0.2718
0.2948	0.3148	0.3341	0.3526	0.3733
0.3946	0.4154	0.4314	0.4417	0.4488
0.4579	0.4710	0.4856	0.4996	0.5080
0.5184	0.5327	0.5443	0.5577	0.5726
0.5892	0.6022	0.6211	0.6389	0.6617
0.6826	0.7014	0.7194	0.7409	0.7602
0.7797	0.7995	0.8183	0.8349	0.8553
0.8775	0.8990	0.9283	0.9623	1.0000

Transect 2_31

Area:

0.0187	0.0268	0.0332	0.0398	0.0469
0.0542	0.0615	0.0707	0.0802	0.0883
0.0971	0.1072	0.1179	0.1292	0.1402
0.1511	0.1624	0.1761	0.1929	0.2126
0.2329	0.2524	0.2720	0.2928	0.3182
0.3440	0.3686	0.3961	0.4236	0.4511
0.4781	0.5090	0.5359	0.5645	0.5889
0.6153	0.6441	0.6743	0.7014	0.7311
0.7610	0.7912	0.8228	0.8571	0.8882
0.9176	0.9480	0.9702	0.9871	1.0000

Hrad:

0.0004	0.0014	0.0028	0.0046	0.0067
0.0091	0.0119	0.0149	0.0183	0.0220
0.0260	0.0303	0.0349	0.0398	0.0450
0.0505	0.0563	0.0625	0.0692	0.0766
0.0848	0.0943	0.1049	0.1169	0.1305
0.1458	0.1627	0.1815	0.2021	0.2245
0.2489	0.2752	0.3035	0.3335	0.3653
0.3987	0.4335	0.4698	0.5076	0.5469
0.5876	0.6296	0.6730	0.7177	0.7634
0.8097	0.8566	0.9041	0.9520	1.0000

width:

0.0242	0.0562	0.0864	0.1146	0.1421
0.1682	0.1952	0.2222	0.2476	0.2727
0.2986	0.3242	0.3497	0.3760	0.4019
0.4274	0.4474	0.4677	0.4677	0.4669
0.4634	0.4485	0.4467	0.4388	0.4355
0.4347	0.4380	0.4433	0.4528	0.4630
0.4729	0.4869	0.5013	0.5212	0.5402
0.5645	0.5881	0.6130	0.6363	0.6601
0.6858	0.7123	0.7387	0.7647	0.8010
0.8388	0.8742	0.9132	0.9567	1.0000

Transect 2_32

Area:

0.0164	0.0256	0.0329	0.0401	0.0469
0.0539	0.0605	0.0668	0.0734	0.0800
0.0863	0.0926	0.0989	0.1048	0.1108
0.1168	0.1244	0.1321	0.1465	0.1627
0.1818	0.2091	0.2339	0.2657	0.2992
0.3350	0.3715	0.4097	0.4468	0.4857
0.5274	0.5666	0.6070	0.6417	0.6783
0.7086	0.7397	0.7691	0.8007	0.8315
0.8600	0.8875	0.9148	0.9423	0.9563

	0.9679	0.9819	Untitled 0.9915	0.9958	1.0000
Transect 2_32					
Area:	0.0005	0.0019	0.0037	0.0059	0.0083
	0.0111	0.0141	0.0174	0.0209	0.0247
	0.0289	0.0335	0.0386	0.0440	0.0500
	0.0563	0.0633	0.0710	0.0797	0.0895
	0.1008	0.1134	0.1273	0.1427	0.1597
	0.1780	0.1980	0.2195	0.2426	0.2672
	0.2933	0.3208	0.3496	0.3798	0.4115
	0.4447	0.4793	0.5151	0.5518	0.5897
	0.6285	0.6679	0.7078	0.7481	0.7889
	0.8301	0.8718	0.9139	0.9566	1.0000
Hrad:	0.0212	0.0519	0.0805	0.1113	0.1400
	0.1672	0.1939	0.2202	0.2450	0.2694
	0.2856	0.2998	0.3168	0.3341	0.3519
	0.3692	0.3757	0.3779	0.3745	0.3694
	0.3669	0.3736	0.3792	0.3844	0.3965
	0.4077	0.4155	0.4300	0.4450	0.4605
	0.4792	0.4991	0.5171	0.5392	0.5547
	0.5745	0.5957	0.6227	0.6468	0.6735
	0.7040	0.7361	0.7730	0.8082	0.8419
	0.8776	0.9125	0.9451	0.9731	1.0000
width:	0.0247	0.0364	0.0457	0.0522	0.0586
	0.0650	0.0712	0.0771	0.0834	0.0897
	0.0989	0.1092	0.1190	0.1289	0.1389
	0.1494	0.1649	0.1841	0.2089	0.2384
	0.2705	0.2989	0.3310	0.3663	0.3974
	0.4310	0.4707	0.5044	0.5387	0.5737
	0.6053	0.6356	0.6688	0.6970	0.7342
	0.7661	0.7964	0.8186	0.8445	0.8666
	0.8836	0.8981	0.9063	0.9163	0.9275
	0.9364	0.9457	0.9572	0.9731	1.0000
Transect 2_33					
Area:	0.0007	0.0019	0.0034	0.0053	0.0074
	0.0098	0.0125	0.0154	0.0184	0.0217
	0.0252	0.0291	0.0332	0.0378	0.0428
	0.0487	0.0551	0.0622	0.0708	0.0806
	0.0914	0.1030	0.1155	0.1290	0.1433
	0.1586	0.1750	0.1926	0.2110	0.2308
	0.2520	0.2755	0.3032	0.3347	0.3688
	0.4036	0.4393	0.4761	0.5135	0.5516
	0.5904	0.6301	0.6705	0.7120	0.7545
	0.7991	0.8468	0.8965	0.9475	1.0000
Hrad:	0.0346	0.0636	0.0948	0.1253	0.1540
	0.1830	0.2141	0.2441	0.2728	0.3007
	0.3218	0.3409	0.3590	0.3747	0.3661
	0.3678	0.3884	0.3829	0.3606	0.3651
	0.3866	0.4058	0.4249	0.4404	0.4622
	0.4746	0.4860	0.5085	0.5258	0.5363
	0.5470	0.5529	0.5532	0.4777	0.5096
	0.5474	0.5766	0.6128	0.6488	0.6844
	0.7200	0.7506	0.7792	0.8107	0.8371
	0.8773	0.9139	0.9478	0.9765	1.0000
width:	0.0176	0.0258	0.0319	0.0371	0.0424
	0.0472	0.0511	0.0550	0.0589	0.0629

	0.0683	0.0743	Untitled 0.0806	0.0878	0.1020
	0.1157	0.1241	0.1423	0.1725	0.1941
	0.2080	0.2234	0.2393	0.2580	0.2732
	0.2946	0.3176	0.3342	0.3543	0.3802
	0.4071	0.4818	0.5442	0.6206	0.6411
	0.6533	0.6751	0.6884	0.7013	0.7142
	0.7267	0.7439	0.7626	0.7784	0.7989
	0.8653	0.9087	0.9349	0.9590	1.0000
Transect 2_34					
Area:	0.0009	0.0025	0.0048	0.0077	0.0112
	0.0152	0.0200	0.0258	0.0325	0.0405
	0.0497	0.0600	0.0714	0.0842	0.0987
	0.1145	0.1313	0.1490	0.1674	0.1867
	0.2066	0.2274	0.2490	0.2714	0.2947
	0.3184	0.3426	0.3671	0.3919	0.4169
	0.4422	0.4677	0.4935	0.5195	0.5458
	0.5723	0.5991	0.6263	0.6539	0.6820
	0.7106	0.7397	0.7693	0.7994	0.8303
	0.8625	0.8959	0.9301	0.9649	1.0000
Hrad:	0.0233	0.0456	0.0651	0.0860	0.1065
	0.1231	0.1333	0.1455	0.1554	0.1651
	0.1819	0.1955	0.2094	0.2176	0.2281
	0.2484	0.2692	0.2913	0.3136	0.3366
	0.3582	0.3782	0.4001	0.4191	0.4424
	0.4691	0.4963	0.5253	0.5551	0.5849
	0.6143	0.6437	0.6730	0.7015	0.7293
	0.7571	0.7837	0.8078	0.8281	0.8477
	0.8693	0.8916	0.9109	0.9253	0.9309
	0.9267	0.9370	0.9502	0.9738	1.0000
width:	0.0380	0.0558	0.0741	0.0900	0.1049
	0.1232	0.1498	0.1770	0.2094	0.2455
	0.2732	0.3066	0.3408	0.3869	0.4328
	0.4612	0.4879	0.5116	0.5340	0.5546
	0.5769	0.6014	0.6225	0.6477	0.6661
	0.6786	0.6901	0.6988	0.7058	0.7126
	0.7197	0.7264	0.7330	0.7403	0.7480
	0.7556	0.7641	0.7750	0.7893	0.8043
	0.8173	0.8294	0.8443	0.8637	0.8918
	0.9307	0.9562	0.9788	0.9908	1.0000
Transect 2_35					
Area:	0.0003	0.0010	0.0019	0.0029	0.0047
	0.0074	0.0107	0.0145	0.0188	0.0237
	0.0292	0.0366	0.0490	0.0665	0.0867
	0.1076	0.1289	0.1507	0.1730	0.1957
	0.2187	0.2420	0.2655	0.2892	0.3130
	0.3370	0.3610	0.3851	0.4093	0.4336
	0.4581	0.4827	0.5074	0.5323	0.5573
	0.5827	0.6083	0.6343	0.6605	0.6874
	0.7149	0.7431	0.7720	0.8017	0.8322
	0.8636	0.8958	0.9292	0.9635	1.0000
Hrad:	0.0247	0.0499	0.0744	0.0920	0.0744
	0.0967	0.1148	0.1354	0.1578	0.1757
	0.1931	0.2015	0.1893	0.1280	0.1616
	0.1954	0.2290	0.2624	0.2953	0.3274
	0.3619	0.3962	0.4303	0.4667	0.5030
	0.5391	0.5750	0.6105	0.6460	0.6814

			Untitled		
	0.7158	0.7500	0.7843	0.8179	0.8486
	0.8758	0.9029	0.9313	0.9562	0.9682
	0.9823	1.0006	1.0121	1.0195	1.0288
width:	1.0461	1.0483	1.0524	1.0567	1.0000
	0.0137	0.0199	0.0248	0.0316	0.0636
	0.0767	0.0928	0.1069	0.1192	0.1346
	0.1510	0.2616	0.3853	0.5193	0.5369
	0.5506	0.5631	0.5745	0.5858	0.5976
	0.6044	0.6107	0.6170	0.6197	0.6223
	0.6249	0.6277	0.6306	0.6335	0.6362
	0.6398	0.6434	0.6468	0.6506	0.6565
	0.6651	0.6735	0.6808	0.6905	0.7097
	0.7276	0.7425	0.7626	0.7862	0.8088
	0.8253	0.8544	0.8828	0.9117	1.0000
Transect 2_36					
Area:	0.0005	0.0035	0.0087	0.0142	0.0203
	0.0274	0.0353	0.0438	0.0532	0.0636
	0.0745	0.0864	0.1007	0.1166	0.1335
	0.1508	0.1683	0.1859	0.2036	0.2217
	0.2401	0.2588	0.2778	0.2972	0.3168
	0.3366	0.3565	0.3769	0.3980	0.4200
	0.4426	0.4657	0.4895	0.5149	0.5414
	0.5686	0.5965	0.6248	0.6536	0.6829
	0.7131	0.7436	0.7743	0.8053	0.8367
Hrad:	0.8685	0.9008	0.9335	0.9666	1.0000
	0.0151	0.0244	0.0545	0.0827	0.1065
	0.1218	0.1442	0.1672	0.1856	0.2135
	0.2408	0.2514	0.2396	0.2648	0.2602
	0.2916	0.3229	0.3536	0.3842	0.4077
	0.4371	0.4612	0.4865	0.5107	0.5412
	0.5715	0.5984	0.6089	0.6186	0.6316
	0.6526	0.6703	0.6700	0.6646	0.6745
	0.6938	0.7148	0.7362	0.7576	0.7802
	0.7890	0.8174	0.8454	0.8692	0.8907
width:	0.9102	0.9325	0.9558	0.9775	1.0000
	0.0299	0.1483	0.1594	0.1722	0.1904
	0.2249	0.2446	0.2661	0.2949	0.3187
	0.3318	0.3837	0.4629	0.4822	0.5130
	0.5171	0.5211	0.5256	0.5300	0.5439
	0.5493	0.5611	0.5710	0.5819	0.5854
	0.5889	0.5957	0.6189	0.6434	0.6650
	0.6782	0.6947	0.7306	0.7747	0.8026
	0.8196	0.8345	0.8487	0.8626	0.8903
	0.9039	0.9097	0.9159	0.9264	0.9394
	0.9543	0.9660	0.9766	0.9888	1.0000
Transect 2_37					
Area:	0.0009	0.0029	0.0067	0.0125	0.0203
	0.0301	0.0418	0.0551	0.0694	0.0845
	0.1007	0.1187	0.1387	0.1611	0.1839
	0.2069	0.2298	0.2527	0.2757	0.2987
	0.3218	0.3448	0.3679	0.3910	0.4141
	0.4372	0.4604	0.4836	0.5068	0.5301
	0.5533	0.5766	0.5999	0.6233	0.6466
	0.6700	0.6934	0.7169	0.7403	0.7638
	0.7873	0.8109	0.8344	0.8580	0.8816
	0.9052	0.9289	0.9526	0.9763	1.0000

			Untitled		
Hrad:	0.0134	0.0282	0.0329	0.0432	0.0546
	0.0671	0.0770	0.0952	0.1135	0.1314
	0.1434	0.1537	0.1674	0.1671	0.1907
	0.2142	0.2378	0.2613	0.2847	0.3082
	0.3316	0.3550	0.3784	0.4017	0.4250
	0.4483	0.4715	0.4948	0.5180	0.5412
	0.5643	0.5875	0.6106	0.6337	0.6567
	0.6798	0.7028	0.7258	0.7488	0.7717
	0.7947	0.8176	0.8405	0.8633	0.8861
width:	0.9090	0.9318	0.9545	0.9773	1.0000
	0.0657	0.1014	0.2036	0.2889	0.3714
	0.4486	0.5429	0.5788	0.6186	0.6559
	0.7190	0.7992	0.8843	0.9637	0.9646
	0.9656	0.9665	0.9675	0.9684	0.9694
	0.9703	0.9713	0.9723	0.9733	0.9744
	0.9754	0.9764	0.9774	0.9785	0.9795
	0.9805	0.9815	0.9826	0.9836	0.9846
	0.9856	0.9867	0.9877	0.9887	0.9897
	0.9908	0.9918	0.9928	0.9938	0.9949
	0.9959	0.9969	0.9979	0.9990	1.0000
Transect 2_38					
Area:	0.0037	0.0080	0.0131	0.0189	0.0254
	0.0327	0.0407	0.0494	0.0588	0.0686
	0.0784	0.0883	0.0981	0.1092	0.1223
	0.1354	0.1486	0.1618	0.1775	0.1939
	0.2104	0.2268	0.2433	0.2604	0.2781
	0.2965	0.3156	0.3355	0.3561	0.3774
	0.3994	0.4221	0.4457	0.4699	0.4948
	0.5204	0.5468	0.5739	0.6017	0.6302
	0.6597	0.6931	0.7271	0.7618	0.7971
	0.8351	0.8754	0.9163	0.9578	1.0000
Hrad:	0.2948	0.5495	0.7797	0.9941	1.1881
	1.3867	1.5791	1.7667	1.9505	2.2566
	2.5744	2.8915	3.2078	2.6983	3.0151
	3.3313	3.6467	3.9613	3.5061	3.8211
	4.1354	4.4491	4.7122	4.8439	4.9778
	5.1138	5.2516	5.3422	5.4882	5.6351
	5.7829	5.8737	6.0283	6.1833	6.3387
	6.4943	6.5875	6.7486	6.9097	7.0708
	6.4481	6.6449	6.8404	7.0346	7.2276
	6.7563	6.9721	7.1862	7.3988	1.0000
width:	0.0124	0.0146	0.0168	0.0190	0.0214
	0.0236	0.0258	0.0279	0.0301	0.0304
	0.0304	0.0305	0.0306	0.0404	0.0405
	0.0406	0.0407	0.0408	0.0506	0.0507
	0.0508	0.0509	0.0516	0.0537	0.0558
	0.0579	0.0600	0.0627	0.0648	0.0669
	0.0690	0.0718	0.0739	0.0759	0.0780
	0.0801	0.0829	0.0850	0.0870	0.0890
	0.1022	0.1042	0.1062	0.1082	0.1102
	0.1235	0.1255	0.1274	0.1294	1.0000
Transect 2_39					
Area:	0.0001	0.0005	0.0011	0.0028	0.0050
	0.0080	0.0118	0.0161	0.0212	0.0269
	0.0335	0.0407	0.0490	0.0579	0.0676

			Untitled		
	0.0782	0.0895	0.1016	0.1147	0.1287
	0.1432	0.1589	0.1753	0.1926	0.2106
	0.2296	0.2490	0.2694	0.2911	0.3136
	0.3369	0.3613	0.3868	0.4135	0.4412
	0.4695	0.4991	0.5297	0.5613	0.5941
	0.6278	0.6632	0.7000	0.7381	0.7774
	0.8182	0.8603	0.9045	0.9511	1.0000
Hrad:					
	0.0255	0.0509	0.0582	0.0770	0.1001
	0.1150	0.1525	0.1685	0.2009	0.2254
	0.2527	0.2666	0.2943	0.3101	0.3390
	0.3707	0.3897	0.4068	0.4391	0.4581
	0.4940	0.4992	0.5310	0.5579	0.5707
	0.6110	0.6376	0.6559	0.6668	0.6953
	0.7222	0.7348	0.7557	0.7773	0.7992
	0.8355	0.8427	0.8635	0.8801	0.9171
	0.9260	0.9365	0.9569	0.9688	0.9857
	0.9992	1.0133	1.0172	1.0123	1.0000
width:					
	0.0050	0.0100	0.0196	0.0369	0.0495
	0.0696	0.0772	0.0957	0.1058	0.1194
	0.1324	0.1527	0.1664	0.1866	0.1996
	0.2108	0.2297	0.2498	0.2612	0.2810
	0.2899	0.3183	0.3302	0.3453	0.3690
	0.3758	0.3906	0.4108	0.4365	0.4510
	0.4665	0.4917	0.5119	0.5319	0.5520
	0.5620	0.5922	0.6135	0.6378	0.6478
	0.6780	0.7082	0.7315	0.7619	0.7887
	0.8189	0.8490	0.8909	0.9396	1.0000
Transect 2_4					
Area:					
	0.0023	0.0082	0.0161	0.0255	0.0359
	0.0474	0.0608	0.0760	0.0919	0.1081
	0.1247	0.1414	0.1584	0.1758	0.1934
	0.2113	0.2295	0.2479	0.2666	0.2854
	0.3045	0.3237	0.3431	0.3627	0.3826
	0.4027	0.4230	0.4434	0.4642	0.4854
	0.5076	0.5305	0.5539	0.5779	0.6026
	0.6278	0.6532	0.6787	0.7044	0.7302
	0.7562	0.7823	0.8087	0.8353	0.8621
	0.8892	0.9166	0.9443	0.9721	1.0000
Hrad:					
	0.0159	0.0332	0.0524	0.0727	0.0918
	0.1089	0.1174	0.1356	0.1610	0.1857
	0.2112	0.2359	0.2588	0.2829	0.3059
	0.3292	0.3517	0.3756	0.3994	0.4228
	0.4463	0.4703	0.4934	0.5145	0.5373
	0.5585	0.5816	0.6040	0.6244	0.6324
	0.6440	0.6559	0.6686	0.6865	0.6960
	0.6930	0.7179	0.7426	0.7664	0.7877
	0.8114	0.8351	0.8523	0.8746	0.8943
	0.9126	0.9258	0.9506	0.9753	1.0000
width:					
	0.1456	0.2484	0.3109	0.3540	0.3939
	0.4389	0.5221	0.5649	0.5756	0.5870
	0.5948	0.6037	0.6165	0.6255	0.6362
	0.6457	0.6563	0.6637	0.6710	0.6785
	0.6855	0.6914	0.6982	0.7078	0.7148
	0.7236	0.7297	0.7364	0.7488	0.7804
	0.8057	0.8291	0.8515	0.8670	0.8929
	0.9079	0.9118	0.9156	0.9207	0.9284
	0.9332	0.9379	0.9498	0.9558	0.9647

			Untitled		
	0.9749	0.9906	0.9937	0.9969	1.0000
Transect 2_40					
Area:					
	0.0003	0.0011	0.0029	0.0053	0.0087
	0.0129	0.0179	0.0237	0.0303	0.0378
	0.0460	0.0550	0.0649	0.0756	0.0871
	0.0994	0.1125	0.1263	0.1410	0.1565
	0.1728	0.1899	0.2078	0.2265	0.2462
	0.2665	0.2877	0.3098	0.3327	0.3563
	0.3807	0.4060	0.4321	0.4590	0.4867
	0.5153	0.5446	0.5748	0.6057	0.6375
	0.6700	0.7034	0.7377	0.7727	0.8086
	0.8453	0.8828	0.9211	0.9601	1.0000
Hrad:					
	0.0191	0.0376	0.0558	0.0723	0.0916
	0.1127	0.1348	0.1547	0.1719	0.1948
	0.2140	0.2373	0.2520	0.2748	0.2959
	0.3151	0.3371	0.3570	0.3770	0.3970
	0.4169	0.4381	0.4570	0.4757	0.4953
	0.5171	0.5352	0.5548	0.5772	0.5971
	0.6171	0.6368	0.6585	0.6773	0.6960
	0.7160	0.7385	0.7585	0.7785	0.7985
	0.8185	0.8382	0.8579	0.8789	0.8979
	0.9154	0.9407	0.9609	0.9798	1.0000
width:					
	0.0134	0.0302	0.0514	0.0734	0.0949
	0.1149	0.1330	0.1531	0.1762	0.1939
	0.2150	0.2318	0.2576	0.2752	0.2945
	0.3154	0.3338	0.3539	0.3741	0.3942
	0.4144	0.4335	0.4547	0.4762	0.4970
	0.5154	0.5376	0.5585	0.5763	0.5967
	0.6170	0.6376	0.6562	0.6777	0.6993
	0.7198	0.7375	0.7577	0.7780	0.7983
	0.8185	0.8392	0.8599	0.8792	0.9005
	0.9234	0.9385	0.9586	0.9799	1.0000
Transect 2_5					
Area:					
	0.0015	0.0047	0.0085	0.0131	0.0188
	0.0254	0.0330	0.0416	0.0511	0.0623
	0.0746	0.0876	0.1018	0.1171	0.1330
	0.1494	0.1664	0.1839	0.2021	0.2208
	0.2399	0.2594	0.2793	0.2996	0.3205
	0.3421	0.3640	0.3864	0.4092	0.4323
	0.4558	0.4797	0.5040	0.5287	0.5538
	0.5793	0.6054	0.6322	0.6597	0.6881
	0.7175	0.7474	0.7777	0.8083	0.8392
	0.8704	0.9020	0.9342	0.9669	1.0000
Hrad:					
	0.0192	0.0440	0.0672	0.0856	0.1029
	0.1187	0.1373	0.1548	0.1704	0.1748
	0.1965	0.2168	0.2296	0.2508	0.2749
	0.2984	0.3224	0.3434	0.3661	0.3901
	0.4149	0.4393	0.4639	0.4875	0.5015
	0.5252	0.5479	0.5710	0.5952	0.6193
	0.6428	0.6647	0.6856	0.7093	0.7321
	0.7500	0.7647	0.7749	0.7905	0.7908
	0.8048	0.8289	0.8519	0.8758	0.9005
	0.9214	0.9423	0.9566	0.9754	1.0000
width:					
	0.0800	0.1067	0.1274	0.1545	0.1837
	0.2154	0.2421	0.2701	0.3096	0.3583

			Untitled		
	0.3817	0.4067	0.4460	0.4697	0.4865
	0.5037	0.5191	0.5387	0.5552	0.5691
	0.5815	0.5938	0.6054	0.6179	0.6425
	0.6547	0.6679	0.6803	0.6910	0.7016
	0.7127	0.7252	0.7388	0.7490	0.7601
	0.7761	0.7954	0.8197	0.8385	0.8744
	0.8959	0.9055	0.9162	0.9257	0.9342
	0.9465	0.9586	0.9775	0.9919	1.0000
Transect 2_6					
Area:	0.0011	0.0054	0.0123	0.0200	0.0286
	0.0380	0.0481	0.0589	0.0704	0.0826
	0.0953	0.1087	0.1225	0.1367	0.1514
	0.1665	0.1820	0.1979	0.2142	0.2309
	0.2480	0.2656	0.2836	0.3020	0.3208
	0.3400	0.3597	0.3798	0.4004	0.4215
	0.4432	0.4655	0.4883	0.5119	0.5363
	0.5616	0.5880	0.6158	0.6451	0.6758
	0.7070	0.7384	0.7699	0.8017	0.8337
	0.8660	0.8988	0.9319	0.9654	1.0000
Hrad:	0.0189	0.0294	0.0593	0.0871	0.1119
	0.1372	0.1619	0.1857	0.2091	0.2329
	0.2575	0.2821	0.3065	0.3322	0.3580
	0.3836	0.4082	0.4325	0.4566	0.4794
	0.5027	0.5255	0.5479	0.5702	0.5930
	0.6150	0.6360	0.6556	0.6749	0.6918
	0.7075	0.7251	0.7400	0.7483	0.7594
	0.7649	0.7618	0.7595	0.7520	0.7641
	0.7954	0.8250	0.8542	0.8830	0.9118
	0.9350	0.9600	0.9827	1.0027	1.0000
width:	0.0604	0.1839	0.2083	0.2306	0.2561
	0.2774	0.2975	0.3178	0.3374	0.3554
	0.3710	0.3858	0.4002	0.4122	0.4235
	0.4346	0.4462	0.4578	0.4693	0.4819
	0.4936	0.5055	0.5176	0.5296	0.5409
	0.5527	0.5653	0.5790	0.5930	0.6089
	0.6261	0.6416	0.6595	0.6837	0.7059
	0.7339	0.7716	0.8106	0.8578	0.8844
	0.8888	0.8949	0.9012	0.9078	0.9143
	0.9261	0.9360	0.9481	0.9627	1.0000
Transect 2_7					
Area:	0.0004	0.0014	0.0030	0.0055	0.0087
	0.0131	0.0184	0.0249	0.0327	0.0429
	0.0542	0.0663	0.0792	0.0932	0.1081
	0.1235	0.1394	0.1561	0.1735	0.1917
	0.2106	0.2305	0.2513	0.2734	0.2967
	0.3207	0.3454	0.3707	0.3965	0.4227
	0.4493	0.4760	0.5028	0.5298	0.5571
	0.5845	0.6120	0.6398	0.6678	0.6960
	0.7244	0.7531	0.7821	0.8114	0.8416
	0.8725	0.9038	0.9356	0.9676	1.0000
Hrad:	0.0205	0.0367	0.0448	0.0624	0.0741
	0.0890	0.0987	0.1128	0.1263	0.1272
	0.1506	0.1725	0.1925	0.2090	0.2320
	0.2568	0.2791	0.2962	0.3197	0.3349
	0.3544	0.3678	0.3849	0.3888	0.4081
	0.4288	0.4490	0.4709	0.4961	0.5214

			Untitled		
	0.5490	0.5784	0.6075	0.6349	0.6632
	0.6923	0.7205	0.7453	0.7731	0.7999
	0.8245	0.8477	0.8735	0.8924	0.8978
	0.9093	0.9314	0.9545	0.9763	1.0000
width:	0.0215	0.0373	0.0663	0.0874	0.1178
	0.1469	0.1862	0.2206	0.2669	0.3372
	0.3600	0.3846	0.4116	0.4462	0.4661
	0.4810	0.4997	0.5272	0.5429	0.5725
	0.5945	0.6269	0.6531	0.7035	0.7273
	0.7482	0.7695	0.7876	0.7995	0.8110
	0.8185	0.8230	0.8277	0.8345	0.8400
	0.8442	0.8493	0.8584	0.8637	0.8700
	0.8786	0.8884	0.8954	0.9092	0.9374
	0.9595	0.9704	0.9802	0.9912	1.0000
Transect 2_8					
Area:	0.0009	0.0023	0.0041	0.0065	0.0093
	0.0125	0.0160	0.0200	0.0248	0.0308
	0.0379	0.0460	0.0559	0.0677	0.0809
	0.0946	0.1091	0.1246	0.1411	0.1584
	0.1764	0.1950	0.2142	0.2339	0.2543
	0.2757	0.2983	0.3218	0.3462	0.3714
	0.3976	0.4246	0.4524	0.4809	0.5099
	0.5391	0.5686	0.5985	0.6286	0.6590
	0.6897	0.7208	0.7528	0.7857	0.8198
	0.8547	0.8903	0.9266	0.9630	1.0000
Hrad:	0.0294	0.0556	0.0698	0.0944	0.1170
	0.1370	0.1580	0.1751	0.1843	0.1725
	0.1899	0.1974	0.1814	0.2048	0.2235
	0.2510	0.2735	0.2878	0.3119	0.3350
	0.3595	0.3862	0.4115	0.4361	0.4555
	0.4702	0.4808	0.5020	0.5205	0.5385
	0.5589	0.5790	0.5975	0.6253	0.6537
	0.6849	0.7151	0.7454	0.7749	0.8045
	0.8355	0.8510	0.8656	0.8858	0.8874
	0.9050	0.9230	0.9514	0.9822	1.0000
width:	0.0313	0.0407	0.0591	0.0689	0.0792
	0.0908	0.1014	0.1144	0.1387	0.1787
	0.1994	0.2329	0.3082	0.3307	0.3617
	0.3770	0.3989	0.4330	0.4525	0.4729
	0.4907	0.5049	0.5204	0.5362	0.5581
	0.5862	0.6203	0.6410	0.6651	0.6898
	0.7114	0.7333	0.7572	0.7691	0.7799
	0.7870	0.7951	0.8028	0.8111	0.8191
	0.8254	0.8470	0.8696	0.9008	0.9238
	0.9444	0.9646	0.9739	0.9804	1.0000
Transect 2_9					
Area:	0.0008	0.0022	0.0040	0.0065	0.0096
	0.0138	0.0186	0.0244	0.0313	0.0393
	0.0485	0.0587	0.0701	0.0823	0.0955
	0.1096	0.1243	0.1396	0.1555	0.1720
	0.1891	0.2071	0.2274	0.2502	0.2742
	0.2991	0.3250	0.3517	0.3790	0.4065
	0.4342	0.4620	0.4900	0.5181	0.5464
	0.5749	0.6035	0.6323	0.6612	0.6903
	0.7196	0.7492	0.7790	0.8092	0.8396
	0.8704	0.9019	0.9340	0.9667	1.0000

Untitled

Hrad:

0.0224	0.0467	0.0640	0.0777	0.0932
0.1042	0.1194	0.1304	0.1435	0.1555
0.1682	0.1838	0.2013	0.2192	0.2371
0.2576	0.2805	0.3032	0.3252	0.3464
0.3661	0.3717	0.3545	0.3605	0.3794
0.3983	0.4185	0.4410	0.4675	0.4985
0.5293	0.5599	0.5902	0.6200	0.6492
0.6791	0.7093	0.7390	0.7677	0.7962
0.8240	0.8488	0.8731	0.8984	0.9234
0.9396	0.9537	0.9700	0.9799	1.0000

width:

0.0358	0.0472	0.0634	0.0841	0.1091
0.1337	0.1576	0.1890	0.2199	0.2549
0.2908	0.3226	0.3513	0.3790	0.4067
0.4295	0.4472	0.4647	0.4825	0.5012
0.5214	0.5624	0.6475	0.7006	0.7297
0.7581	0.7840	0.8051	0.8182	0.8226
0.8270	0.8315	0.8361	0.8412	0.8468
0.8513	0.8553	0.8595	0.8649	0.8702
0.8761	0.8850	0.8942	0.9023	0.9105
0.9274	0.9465	0.9634	0.9868	1.0000

Transect 3_1

Area:

0.0020	0.0114	0.0223	0.0338	0.0459
0.0586	0.0718	0.0855	0.0996	0.1141
0.1291	0.1445	0.1604	0.1766	0.1933
0.2104	0.2279	0.2459	0.2642	0.2829
0.3019	0.3212	0.3409	0.3608	0.3811
0.4017	0.4226	0.4439	0.4655	0.4874
0.5096	0.5321	0.5550	0.5782	0.6018
0.6258	0.6500	0.6747	0.6997	0.7251
0.7509	0.7771	0.8036	0.8305	0.8578
0.8855	0.9136	0.9421	0.9710	1.0000

Hrad:

0.0111	0.0322	0.0586	0.0840	0.1090
0.1327	0.1564	0.1809	0.2042	0.2273
0.2494	0.2710	0.2931	0.3140	0.3353
0.3558	0.3762	0.3972	0.4178	0.4395
0.4604	0.4827	0.5036	0.5243	0.5452
0.5650	0.5850	0.6054	0.6255	0.6452
0.6647	0.6833	0.7033	0.7208	0.7383
0.7575	0.7752	0.7914	0.8092	0.8264
0.8432	0.8599	0.8771	0.8930	0.9082
0.9242	0.9405	0.9559	0.9768	1.0000

width:

0.1935	0.3581	0.3837	0.4062	0.4253
0.4457	0.4633	0.4767	0.4917	0.5061
0.5215	0.5371	0.5508	0.5662	0.5801
0.5949	0.6093	0.6225	0.6357	0.6468
0.6588	0.6684	0.6797	0.6909	0.7016
0.7134	0.7248	0.7355	0.7463	0.7573
0.7685	0.7805	0.7908	0.8038	0.8167
0.8274	0.8398	0.8537	0.8659	0.8785
0.8914	0.9045	0.9169	0.9307	0.9451
0.9586	0.9719	0.9859	0.9942	1.0000

Transect 3_2

Area:

0.0005	0.0021	0.0043	0.0071	0.0105
0.0143	0.0187	0.0237	0.0290	0.0350
0.0425	0.0540	0.0698	0.0890	0.1085

Untitled

Hrad:

0.1281	0.1479	0.1678	0.1879	0.2082
0.2288	0.2495	0.2704	0.2915	0.3129
0.3345	0.3564	0.3788	0.4016	0.4250
0.4490	0.4734	0.4982	0.5234	0.5490
0.5751	0.6017	0.6289	0.6567	0.6851
0.7142	0.7440	0.7744	0.8053	0.8368
0.8689	0.9015	0.9342	0.9670	1.0000

width:

0.0142	0.0361	0.0555	0.0758	0.0968
0.1178	0.1325	0.1518	0.1699	0.1856
0.1934	0.1933	0.1833	0.1518	0.1838
0.2155	0.2469	0.2781	0.3082	0.3374
0.3670	0.3969	0.4264	0.4540	0.4820
0.5090	0.5324	0.5550	0.5761	0.5919
0.6133	0.6358	0.6581	0.6812	0.7038
0.7210	0.7390	0.7550	0.7739	0.7879
0.8000	0.8162	0.8343	0.8520	0.8689
0.8860	0.9117	0.9411	0.9706	1.0000

Transect 3_3

Area:

0.0351	0.0582	0.0779	0.0945	0.1093
0.1222	0.1418	0.1566	0.1717	0.1898
0.2871	0.4104	0.5427	0.5887	0.5925
0.5966	0.6012	0.6055	0.6117	0.6191
0.6251	0.6302	0.6357	0.6436	0.6505
0.6585	0.6707	0.6837	0.6983	0.7192
0.7332	0.7456	0.7580	0.7693	0.7809
0.7984	0.8149	0.8337	0.8492	0.8702
0.8933	0.9121	0.9287	0.9457	0.9635
0.9812	0.9891	0.9929	0.9964	1.0000

Hrad:

0.0012	0.0049	0.0101	0.0162	0.0228
0.0302	0.0382	0.0471	0.0566	0.0669
0.0778	0.0894	0.1016	0.1144	0.1280
0.1422	0.1572	0.1728	0.1891	0.2061
0.2237	0.2419	0.2608	0.2804	0.3007
0.3215	0.3428	0.3647	0.3871	0.4101
0.4336	0.4576	0.4823	0.5076	0.5336
0.5601	0.5874	0.6153	0.6438	0.6729
0.7025	0.7328	0.7637	0.7953	0.8274
0.8603	0.8939	0.9284	0.9637	1.0000

width:

0.0206	0.0385	0.0646	0.0945	0.1203
0.1471	0.1674	0.1903	0.2149	0.2340
0.2576	0.2792	0.3030	0.3225	0.3413
0.3617	0.3818	0.4033	0.4232	0.4437
0.4646	0.4847	0.5054	0.5221	0.5438
0.5681	0.5897	0.6125	0.6350	0.6561
0.6790	0.6996	0.7169	0.7346	0.7565
0.7769	0.7905	0.8133	0.8325	0.8517
0.8714	0.8912	0.9099	0.9288	0.9493
0.9623	0.9753	0.9925	1.0011	1.0000

	0.8940	0.9165	Untitled 0.9354	0.9626	1.0000
Transect 3_4					
Area:	0.0047	0.0139	0.0255	0.0377	0.0507
	0.0643	0.0785	0.0931	0.1081	0.1236
	0.1393	0.1555	0.1720	0.1888	0.2060
	0.2235	0.2414	0.2596	0.2782	0.2971
	0.3163	0.3359	0.3558	0.3760	0.3965
	0.4174	0.4385	0.4599	0.4815	0.5033
	0.5254	0.5477	0.5703	0.5930	0.6161
	0.6395	0.6632	0.6873	0.7115	0.7360
	0.7608	0.7858	0.8113	0.8371	0.8632
	0.8897	0.9167	0.9441	0.9718	1.0000
Hrad:	0.0171	0.0356	0.0607	0.0846	0.1083
	0.1311	0.1543	0.1781	0.2001	0.2239
	0.2480	0.2692	0.2923	0.3144	0.3371
	0.3573	0.3790	0.4004	0.4209	0.4419
	0.4612	0.4813	0.5025	0.5238	0.5430
	0.5633	0.5848	0.6057	0.6275	0.6491
	0.6699	0.6921	0.7144	0.7332	0.7508
	0.7678	0.7868	0.8061	0.8267	0.8473
	0.8654	0.8826	0.8972	0.9101	0.9296
	0.9435	0.9541	0.9690	0.9838	1.0000
width:	0.2779	0.3918	0.4201	0.4456	0.4682
	0.4906	0.5086	0.5224	0.5403	0.5519
	0.5618	0.5776	0.5885	0.6006	0.6112
	0.6257	0.6371	0.6484	0.6610	0.6723
	0.6859	0.6979	0.7082	0.7180	0.7303
	0.7410	0.7498	0.7593	0.7674	0.7754
	0.7843	0.7915	0.7982	0.8088	0.8206
	0.8329	0.8429	0.8526	0.8607	0.8687
	0.8791	0.8903	0.9042	0.9197	0.9286
	0.9430	0.9607	0.9743	0.9878	1.0000
Transect 3_5					
Area:	0.0022	0.0066	0.0124	0.0195	0.0278
	0.0372	0.0474	0.0586	0.0705	0.0831
	0.0965	0.1104	0.1251	0.1403	0.1562
	0.1728	0.1899	0.2076	0.2261	0.2452
	0.2648	0.2852	0.3061	0.3274	0.3490
	0.3710	0.3933	0.4159	0.4389	0.4622
	0.4859	0.5098	0.5342	0.5589	0.5839
	0.6092	0.6349	0.6610	0.6874	0.7142
	0.7412	0.7687	0.7965	0.8246	0.8531
	0.8819	0.9111	0.9405	0.9702	1.0000
Hrad:	0.0193	0.0392	0.0564	0.0751	0.0945
	0.1136	0.1326	0.1516	0.1724	0.1916
	0.2122	0.2319	0.2506	0.2708	0.2881
	0.3071	0.3269	0.3439	0.3611	0.3796
	0.3975	0.4130	0.4347	0.4572	0.4804
	0.5026	0.5245	0.5467	0.5672	0.5897
	0.6109	0.6322	0.6519	0.6732	0.6944
	0.7136	0.7336	0.7538	0.7725	0.7934
	0.8137	0.8317	0.8515	0.8713	0.8889
	0.9095	0.9286	0.9491	0.9746	1.0000
width:	0.1120	0.1686	0.2205	0.2609	0.2954
	0.3287	0.3590	0.3883	0.4108	0.4359

	0.4567	0.4783	Untitled 0.5014	0.5204	0.5445
	0.5650	0.5835	0.6064	0.6289	0.6487
	0.6692	0.6937	0.7072	0.7189	0.7292
	0.7408	0.7523	0.7632	0.7761	0.7860
	0.7974	0.8085	0.8213	0.8320	0.8425
	0.8553	0.8670	0.8782	0.8911	0.9013
	0.9120	0.9252	0.9362	0.9471	0.9603
	0.9702	0.9815	0.9913	0.9956	1.0000
Transect 3_6					
Area:	0.0025	0.0071	0.0130	0.0202	0.0288
	0.0386	0.0495	0.0616	0.0748	0.0891
	0.1045	0.1210	0.1386	0.1571	0.1763
	0.1959	0.2159	0.2361	0.2566	0.2773
	0.2983	0.3196	0.3412	0.3631	0.3852
	0.4076	0.4301	0.4530	0.4760	0.4992
	0.5226	0.5462	0.5700	0.5939	0.6181
	0.6424	0.6669	0.6915	0.7163	0.7413
	0.7664	0.7916	0.8170	0.8425	0.8683
	0.8942	0.9204	0.9468	0.9733	1.0000
Hrad:	0.0182	0.0360	0.0527	0.0677	0.0840
	0.0991	0.1154	0.1303	0.1459	0.1610
	0.1757	0.1898	0.2056	0.2222	0.2425
	0.2649	0.2875	0.3106	0.3333	0.3559
	0.3776	0.3985	0.4192	0.4417	0.4639
	0.4854	0.5076	0.5276	0.5505	0.5730
	0.5951	0.6171	0.6392	0.6612	0.6816
	0.7040	0.7267	0.7482	0.7699	0.7925
	0.8149	0.8370	0.8586	0.8792	0.8987
	0.9174	0.9369	0.9577	0.9789	1.0000
width:	0.1400	0.1964	0.2461	0.2991	0.3426
	0.3892	0.4289	0.4731	0.5130	0.5537
	0.5949	0.6376	0.6741	0.7072	0.7273
	0.7398	0.7510	0.7602	0.7700	0.7791
	0.7901	0.8021	0.8140	0.8221	0.8305
	0.8397	0.8475	0.8585	0.8646	0.8712
	0.8782	0.8851	0.8918	0.8983	0.9068
	0.9125	0.9177	0.9243	0.9304	0.9354
	0.9405	0.9457	0.9516	0.9583	0.9661
	0.9747	0.9824	0.9886	0.9944	1.0000
Transect 5_1					
Area:	0.0033	0.0096	0.0176	0.0269	0.0373
	0.0488	0.0612	0.0745	0.0888	0.1041
	0.1203	0.1374	0.1555	0.1742	0.1933
	0.2126	0.2322	0.2520	0.2720	0.2923
	0.3127	0.3335	0.3544	0.3756	0.3970
	0.4186	0.4405	0.4625	0.4848	0.5073
	0.5300	0.5529	0.5760	0.5993	0.6229
	0.6466	0.6706	0.6947	0.7191	0.7436
	0.7684	0.7934	0.8185	0.8439	0.8694
	0.8951	0.9211	0.9472	0.9735	1.0000
Hrad:	0.0169	0.0353	0.0539	0.0727	0.0908
	0.1084	0.1262	0.1430	0.1599	0.1760
	0.1916	0.2077	0.2238	0.2443	0.2675
	0.2905	0.3133	0.3363	0.3590	0.3816
	0.4032	0.4253	0.4473	0.4690	0.4904
	0.5119	0.5333	0.5547	0.5759	0.5969

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	0.6175	0.6384	0.6592	0.6799	0.7009
	0.7200	0.7404	0.7611	0.7819	0.8015
	0.8211	0.8412	0.8616	0.8816	0.9014
	0.9211	0.9403	0.9601	0.9800	1.0000

width:

	0.1981	0.2731	0.3272	0.3704	0.4110
	0.4498	0.4850	0.5214	0.5555	0.5915
	0.6280	0.6619	0.6947	0.7132	0.7226
	0.7320	0.7411	0.7494	0.7578	0.7660
	0.7758	0.7842	0.7924	0.8009	0.8096
	0.8178	0.8260	0.8340	0.8419	0.8499
	0.8583	0.8660	0.8739	0.8815	0.8887
	0.8981	0.9058	0.9129	0.9198	0.9278
	0.9359	0.9432	0.9501	0.9573	0.9645
	0.9718	0.9795	0.9866	0.9934	1.0000

Transect 5_2

Area:

	0.0008	0.0029	0.0117	0.0240	0.0374
	0.0514	0.0659	0.0811	0.0971	0.1138
	0.1312	0.1490	0.1671	0.1857	0.2045
	0.2237	0.2431	0.2628	0.2827	0.3029
	0.3233	0.3439	0.3648	0.3858	0.4071
	0.4285	0.4501	0.4719	0.4938	0.5159
	0.5382	0.5607	0.5834	0.6063	0.6294
	0.6527	0.6763	0.7000	0.7239	0.7480
	0.7723	0.7968	0.8216	0.8465	0.8716
	0.8969	0.9225	0.9482	0.9740	1.0000

Hrad:

	0.0121	0.0285	0.0260	0.0488	0.0710
	0.0941	0.1157	0.1356	0.1539	0.1729
	0.1939	0.2160	0.2368	0.2584	0.2800
	0.3011	0.3230	0.3449	0.3668	0.3883
	0.4099	0.4313	0.4532	0.4740	0.4956
	0.5176	0.5402	0.5626	0.5836	0.6042
	0.6246	0.6450	0.6652	0.6852	0.7052
	0.7250	0.7447	0.7643	0.7838	0.8032
	0.8225	0.8417	0.8607	0.8797	0.8986
	0.9174	0.9361	0.9557	0.9779	1.0000

width:

	0.0621	0.1004	0.4517	0.4932	0.5273
	0.5462	0.5699	0.5985	0.6310	0.6585
	0.6769	0.6900	0.7060	0.7186	0.7306
	0.7430	0.7529	0.7620	0.7709	0.7802
	0.7889	0.7975	0.8050	0.8141	0.8216
	0.8281	0.8335	0.8389	0.8463	0.8540
	0.8618	0.8695	0.8772	0.8850	0.8927
	0.9005	0.9082	0.9160	0.9237	0.9314
	0.9392	0.9469	0.9547	0.9624	0.9702
	0.9779	0.9856	0.9923	0.9961	1.0000

NOTE: The summary statistics displayed in this report are based on results found at every computational time step, not just on results from each reporting time step.

Analysis Options

Flow Units CMS

Process Models:

Untitled

Rainfall/Runoff YES

RDII NO

Snowmelt NO

Groundwater NO

Flow Routing YES

Ponding Allowed YES

Water Quality NO

Infiltration Method GREEN_AMPT

Flow Routing Method DYNWAVE

Starting Date 09/05/2014 00:00:00

Ending Date 09/07/2014 00:00:00

Antecedent Dry Days 0.0

Report Time Step 00:00:05

Wet Time Step 00:00:05

Dry Time Step 00:00:05

Routing Time Step 5.00 sec

Variable Time Step YES

Maximum Trials 8

Number of Threads 1

Head Tolerance 0.001500 m

	Volume	Depth
	hectare-m	mm
*****	-----	-----
Runoff Quantity Continuity		
*****	-----	-----
Total Precipitation	7.481	76.000
Evaporation Loss	0.000	0.000
Infiltration Loss	4.876	49.536
Surface Runoff	2.507	25.469
Final Storage	0.098	0.994
Continuity Error (%)	-0.000	

	Volume	Volume
	hectare-m	10^6 ltr
*****	-----	-----
Flow Routing Continuity		
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	2.507	25.072
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.722	7.220
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	1.252	12.521
Initial Stored Volume	0.223	2.230
Final Stored Volume	0.686	6.864
Continuity Error (%)	2.549	

Time-Step Critical Elements

None

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

 Minimum Time Step : 4.50 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00

Subcatchment Runoff Summary

Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm
11B			76.00	0.00	0.00	51.11	23.76
1.71	0.46	0.313	76.00	0.00	0.00	40.91	33.97
14a			76.00	0.00	0.00	47.11	27.90
3.96	1.19	0.447	76.00	0.00	0.00	47.11	27.90
14b			76.00	0.00	0.00	38.00	37.00
6.28	1.61	0.367	76.00	0.00	0.00	38.00	37.00
14-EXT			76.00	0.00	0.00	47.38	27.48
0.37	0.13	0.487	76.00	0.00	0.00	47.38	27.48
15			76.00	0.00	0.00	72.20	3.70
5.93	1.29	0.362	76.00	0.00	0.00	45.67	29.19
15a			76.00	0.00	0.00	75.31	0.00
0.19	0.07	0.049	76.00	0.00	0.00	39.06	35.81
16			76.00	0.00	0.00	39.06	35.81
5.98	1.41	0.384	76.00	0.00	0.00	38.00	37.00
16a			76.00	0.00	0.00	38.00	37.00
0.00	0.00	0.000	76.00	0.00	0.00	34.96	39.96
16b			76.00	0.00	0.00	34.96	39.96
0.43	0.17	0.471	76.00	0.00	0.00	75.05	-0.00
204			76.00	0.00	0.00	74.87	0.00
0.11	0.04	0.487	76.00	0.00	0.00	74.84	-0.00
205			76.00	0.00	0.00	75.07	0.00
0.12	0.04	0.526	76.00	0.00	0.00	76.00	0.00
206			76.00	0.00	0.00	76.00	0.00
-0.00	0.00	-0.000	76.00	0.00	0.00	76.00	0.00
207			76.00	0.00	0.00	76.00	0.00
0.00	0.00	0.000	76.00	0.00	0.00	76.00	0.00
208			76.00	0.00	0.00	76.00	0.00
-0.00	0.00	-0.000	76.00	0.00	0.00	76.00	0.00
209			76.00	0.00	0.00	76.00	0.00
0.00	0.00	0.000	76.00	0.00	0.00	76.00	0.00
EXT			76.00	0.00	0.00	76.00	0.00
0.00	0.00	0.000	76.00	0.00	0.00	76.00	0.00

LID Performance Summary

Untitled

Drain	Initial	Final	Continuity	Total	Evap	Infil	Surface
Outflow	Storage	Storage	Error	Inflow	Loss	Loss	Outflow
Subcatchment	LID Control	LID Control	%	mm	mm	mm	mm
11B	0.00	LID_SWMF11B	-0.00	3485.83	0.00	1670.74	1815.10
0.00	0.00	LID_SWMF14	-0.00	4599.70	0.00	1705.17	2894.54
14a	0.00	LID_SWMF14	-0.00	5192.63	0.00	1731.34	3461.29
0.00	0.00	LID_SWMF15	-0.00	5062.70	0.00	1896.97	3165.73
15	0.00	LID_SWMF16	-0.00	4465.27	0.00	1715.29	2749.98
0.00	0.00	LID_16a	0.00	1271.77	0.00	1271.77	0.00
16a	0.00	LID_16b	-0.00	5401.53	0.00	1682.35	3719.19
0.00	0.00	LID_206	0.00	785.46	0.00	785.46	0.00
206	0.00	LID_207	0.00	829.69	0.00	829.69	0.00
0.00	0.00	LID_208	0.00	891.39	0.00	891.39	0.00
208	0.00	LID_206	0.00	598.20	0.00	598.20	0.00
0.00	0.00	LID_206	-0.00	598.20	0.00	598.20	0.00

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
336	JUNCTION	0.19	0.23	255.23	0 19:06	0.23
338	JUNCTION	0.00	0.00	259.65	0 00:00	0.00
339	JUNCTION	0.00	0.00	258.62	0 00:00	0.00
341	JUNCTION	0.02	0.21	253.39	0 12:05	0.21
342	JUNCTION	0.02	0.28	252.28	0 12:08	0.28
343	JUNCTION	0.03	0.33	252.08	0 12:11	0.33
344	JUNCTION	0.01	0.20	251.70	0 12:13	0.20
345	JUNCTION	0.02	0.25	251.35	0 12:18	0.25
346	JUNCTION	0.03	0.32	251.03	0 12:24	0.32
347	JUNCTION	0.05	0.46	250.77	0 12:38	0.46
348	JUNCTION	0.09	0.53	250.71	0 12:46	0.53
349	JUNCTION	0.09	0.48	250.66	0 12:59	0.48
350	JUNCTION	0.09	0.46	250.63	0 13:02	0.46
351	JUNCTION	0.08	0.42	250.59	0 13:06	0.42
352	JUNCTION	0.06	0.33	250.49	0 13:13	0.33
353	JUNCTION	0.02	0.21	250.37	0 13:06	0.21
354	JUNCTION	0.05	0.29	249.62	0 13:13	0.29
355	JUNCTION	0.03	0.16	248.81	0 13:15	0.16

Untitled							
J56	JUNCTION	0.03	0.24	246.36	0	13:25	0.24
H09	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
H10	OUTFALL	0.00	0.00	257.66	0	00:00	0.00
H11	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
H11a	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
S12	OUTFALL	0.03	0.24	246.24	0	13:25	0.24
S13	OUTFALL	0.00	0.00	243.90	0	00:00	0.00
S14	OUTFALL	0.00	0.00	251.00	0	00:00	0.00
SWMF14	STORAGE	1.37	1.58	255.78	0	18:59	1.58
SWMF15	STORAGE	0.32	0.99	257.14	0	15:16	0.99
SWMF16	STORAGE	0.52	1.89	260.69	0	13:58	1.89

Node Inflow Summary

Total Inflow Volume Node ltr	Flow Balance Error Percent	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	10^6
J36		JUNCTION	0.000	0.051	0 18:59	0	
6.01	0.394						
J38		JUNCTION	0.000	0.000	0 00:00	0	
0	0.000 ltr						
J39		JUNCTION	0.000	0.000	0 00:00	0	
0	0.000 ltr						
J41		JUNCTION	0.455	0.455	0 12:04	1.71	
1.71	-0.144						
J42		JUNCTION	0.000	0.453	0 12:05	0	
1.71	-0.033						
J43		JUNCTION	0.000	0.438	0 12:08	0	
1.71	0.057						
J44		JUNCTION	0.000	0.434	0 12:13	0	
1.71	0.018						
J45		JUNCTION	0.000	0.435	0 12:13	0	
1.71	-0.138						
J46		JUNCTION	0.000	0.417	0 12:18	0	
1.71	-0.103						
J47		JUNCTION	0.000	0.388	0 12:24	0	
1.71	0.208						
J48		JUNCTION	0.000	0.318	0 12:34	0	
1.71	0.044						
J49		JUNCTION	0.000	0.295	0 12:39	0	
1.71	0.342						
J50		JUNCTION	0.000	0.249	0 12:39	0	
1.7	0.125						
J51		JUNCTION	0.000	0.212	0 12:47	0	
1.7	0.208						
J52		JUNCTION	0.000	0.202	0 13:04	0	
1.7	0.487						
J53		JUNCTION	0.000	0.196	0 13:12	0	
1.69	0.027						

Untitled							
J54	JUNCTION	0.000	0.224	0	13:07	0	
1.69	0.263						
J55	JUNCTION	0.000	0.211	0	13:14	0	
1.69	0.146						
J56	JUNCTION	0.000	0.220	0	13:15	0	
1.68	0.189						
H09	OUTFALL	0.039	0.039	0	12:00	0.112	
0.112	0.000						
H10	OUTFALL	0.042	0.042	0	12:00	0.121	
0.121	0.000						
H11	OUTFALL	0.000	0.000	0	00:00	0	
0	0.000 ltr						
H11a	OUTFALL	-0.000	0.000	0	11:59	-3.33e-019	
1.76e-017	0.000 ltr						
S12	OUTFALL	0.000	0.194	0	13:25	0	
1.68	0.000						
S13	OUTFALL	0.000	0.051	0	19:07	-1.15e-018	
5.99	0.000						
S14	OUTFALL	-0.000	0.000	0	11:48	4.82e-018	
1.13e-017	0.000 ltr						
SWMF14	STORAGE	2.921	2.921	0	12:00	10.6	
12.8	0.004						
SWMF15	STORAGE	1.305	1.305	0	12:05	6.12	
6.12	-0.002						
SWMF16	STORAGE	1.583	1.583	0	12:00	6.4	
6.4	-0.015						

Node Surge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

of Max Occurrence hr:min	Maximum Outflow Unit CMS	Average Volume 1000 m3	Avg Pcnt Full	Evap Loss	Exfil Pcnt	Maximum Volume 1000 m3	Max Pcnt Full	Time days
SWMF14		7.514	20	0	0	10.749	28	0
18:59	0.051	1.183	8	0	100	3.607	25	0
SWMF15								
15:16	0.117	0.704	4	0	100	3.274	17	0
SWMF16								

13:58 0.394

Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10 ⁶ ltr
H09	47.26	0.001	0.039	0.112
H10	47.41	0.001	0.042	0.121
H11	0.00	0.000	0.000	0.000
H11a	0.00	0.000	0.000	0.000
S12	72.60	0.013	0.194	1.680
S13	92.24	0.038	0.051	5.990
S14	0.00	0.000	0.000	0.000
System	37.07	0.054	0.245	7.903

Link Flow Summary

Link	Type	Maximum Flow CMS	Time of Max Occurrence days hr:min	Maximum veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.000	0 00:00	0.00	0.00	0.00
C12	CONDUIT	0.000	0 00:00	0.00	0.00	0.00
C13	CONDUIT	0.051	0 19:07	0.85	0.01	0.06
C2_18	CHANNEL	0.453	0 12:05	0.59	0.00	0.12
C2_19	CHANNEL	0.438	0 12:08	0.35	0.01	0.16
C2_20	CHANNEL	0.434	0 12:13	0.39	0.02	0.20
C2_21	CHANNEL	0.435	0 12:13	0.38	0.01	0.15
C2_22	CHANNEL	0.417	0 12:18	0.38	0.00	0.13
C2_23	CHANNEL	0.388	0 12:24	0.43	0.00	0.17
C2_24	CHANNEL	0.318	0 12:34	0.32	0.00	0.19
C2_25	CHANNEL	0.295	0 12:39	0.34	0.02	0.20
C2_26	CHANNEL	0.249	0 12:39	0.28	0.03	0.21
C2_27	CHANNEL	0.212	0 12:47	0.27	0.04	0.24
C2_28	CHANNEL	0.202	0 13:04	0.28	0.04	0.20
C2_29	CHANNEL	0.196	0 13:12	0.22	0.01	0.09
C2_30	CHANNEL	0.224	0 13:07	0.47	0.00	0.08
C2_31	CHANNEL	0.211	0 13:14	0.46	0.00	0.07
C2_32	CHANNEL	0.220	0 13:15	0.80	0.00	0.05
C2_33	CHANNEL	0.194	0 13:25	0.32	0.00	0.08
OR1	ORIFICE	0.000	0 00:00			0.00
OR16	ORIFICE	0.051	0 18:59			1.00
w1	WEIR	0.000	0 00:00			0.00
w11	WEIR	0.000	0 00:00			0.00
w12	WEIR	0.000	0 00:00			0.00

Flow Classification Summary

Untitled

Inlet Conduit Ctrl	Adjusted /Actual Length	Fraction of Time in Flow Class							
		Up		Down		Sub		Sup	
		Dry	Dry	Dry	Crit	Crit	Crit	Crit	Norm
-									
C1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C12	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C13	1.00	0.08	0.00	0.00	0.00	0.00	0.00	0.92	0.00
C2_18	1.00	0.05	0.00	0.00	0.95	0.00	0.00	0.00	0.77
C2_19	1.00	0.06	0.00	0.00	0.94	0.00	0.00	0.00	0.88
C2_20	1.00	0.07	0.00	0.00	0.93	0.00	0.00	0.00	0.00
C2_21	1.00	0.09	0.00	0.00	0.91	0.00	0.00	0.00	0.84
C2_22	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.82
C2_23	1.00	0.10	0.00	0.00	0.90	0.00	0.00	0.00	0.78
C2_24	1.00	0.16	0.00	0.00	0.84	0.00	0.00	0.00	0.65
C2_25	1.00	0.19	0.00	0.00	0.81	0.00	0.00	0.00	0.00
C2_26	1.00	0.23	0.00	0.00	0.77	0.00	0.00	0.00	0.00
C2_27	1.00	0.25	0.00	0.00	0.75	0.00	0.00	0.00	0.00
C2_28	1.00	0.26	0.00	0.00	0.74	0.00	0.00	0.00	0.00
C2_29	1.00	0.26	0.00	0.00	0.74	0.00	0.00	0.00	0.00
C2_30	1.00	0.27	0.00	0.00	0.73	0.00	0.00	0.00	0.73
C2_31	1.00	0.27	0.00	0.00	0.73	0.00	0.00	0.00	0.00
C2_32	1.00	0.27	0.00	0.00	0.73	0.00	0.00	0.00	0.44
C2_33	1.00	0.27	0.00	0.00	0.73	0.00	0.00	0.00	0.27

Conduit Surcharge Summary

No conduits were surcharged.

```
Analysis begun on: Thu Jul 20 13:32:54 2017
Analysis ended on: Thu Jul 20 13:33:03 2017
Total elapsed time: 00:00:09
```



BURNSIDE

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Appendix F

SWMF No. 14

Project: **LMB/Blue Sky - SWMF14**

Location: City of Barrie
 Project #: 300039296
 Created By: JM
 Checked By:
 Date: 12-Dec-2016
 Updated: 29-Jun-2017



Pond Permanent Pool and Extended Detention Storage

Summary of Land Uses		Area =	Imperviousness =
Catchment 14a + 14b + 14-EXT		35.14 ha	20%
TOTAL		35.14 ha	20%
Protection Level	1	Type "1" for Enhanced, "2" for Normal, "3" for Basic	
Pond Type	Wetland	Choose Infiltration, Wetpond, Wetland, or Hybrid	
Imperviousness %	20	Table 3.2 Code 2	
MOE 2003 Table 3.2 Volume		63 m ³ /ha	
		23 m ³ /ha	Less 40 m ³ /ha for active storage

Type of SWM Facility	Protection Level	Permanent Pool Volume (m ³)	Extended Detention Volume *		Estimated Peak Release Rate (m ³ /s)
			MOE Guideline (40m ³ /ha) (m ³)	25mm Storm Runoff (m ³)	
Wetland	1	791	1406	3299	0.0573

- NOTE:**
- * The greater of the MOE Guideline (40m³/ha) and the 25mm Storm Runoff Volume (PCSWMM) is used as the Extended Detention Volume.
 - The Estimated Peak Release Rate is based on the Extended Detention Volume divided by 24hrs divided by 3600sec multiplied by 1.5.
 - The constant of 1.5 is used to determine the approx. peak release rate from the average release rate.

Project: LMB/Blue Sky - SWMF14

Location: City of Barrie

Project #: 300039296

Date: 12-Dec-2016

Updated: 28-Jun-2017



FOREBAY SIZING CHECK

FOREBAY REQUIREMENTS

INPUT AREA

LENGTH TO WIDTH RATIO (r):	2.0	
PEAK QUALITY STORM RELEASE RATE:	0.0720 m ³ /s	
PEAK STORM SEWER DESIGN STORM FLOW INTO POND:	2.56 m ³ /s	
PARTICLE SETTLING VELOCITY (v _s):	3.00E-04 m/s	3.00E-4 FOR 150um PARTICLES
FOREBAY DEPTH:	1.00 m	
FOREBAY BERM TARGET VELOCITY:	0.5 m/s	0.5 STANDARD

SETTLING LENGTH CALCULATION

FOREBAY LENGTH: 22

DISPERSION LENGTH CALCULATION

FOREBAY LENGTH: 41

FOREBAY DIMENSIONS

FOREBAY LENGTH: 41
FOREBAY WIDTH: 20
FOREBAY DEPTH: 1.00

Project: **LMB/Blue Sky - SWMF14**

Location: City of Barrie
 Project #: 300039296
 Date: 12-Dec-2016
 Updated: 30-Jun-2017



Pond Storage Calculations

INPUT AREA

Base of Pond: 254.20
 N.W.L.: 255.20
 Increment for Volume: 0.1 m
 Required Permanent Pool Volume: 790.65 m³
 Permanent Pool Volume Provided: 2229.70 m³
 Required Extended Detention 3299.00 m³
 Extended Detention Provided 5625.45 m³

ELEVATION / STORAGE INFORMATION

	Elevation	Stage	Area 1	Area 2	Total Area	Avg. Area	Incremental Storage	Cumulative Storage	Cumulative Storage above Permanent Pool
	(m)	(m)	(m ²)	(m ²)	(m ²)	(m ²)	(m ³)	(m ³)	(m ³)
Base of Pond	254.2	0.00		544	544.00				
	254.3	0.10		1106	1106.00	825.00	82.50	82.50	0.00
	254.4	0.20		1199	1199.00	1152.50	115.25	197.75	0.00
	254.5	0.30		1295	1295.00	1247.00	124.70	322.45	0.00
	254.6	0.40		1395	1395.00	1345.00	134.50	456.95	0.00
	254.7	0.50		1498	1498.00	1446.50	144.65	601.60	0.00
	254.8	0.60		1662	1662.00	1580.00	158.00	759.60	0.00
	254.9	0.70		1836	1836.00	1749.00	174.90	934.50	0.00
	255.0	0.80		4175	4175.00	3005.50	300.55	1235.05	0.00
	255.1	0.90		4843	4843.00	4509.00	450.90	1685.95	0.00
NWL	255.2	1.00		6032	6032.00	5437.50	543.75	2229.70	0.00
	255.3	1.10		14614	14614.00	10323.00	1032.30	3262.00	1032.30
	255.4	1.20		15075	15075.00	14844.50	1484.45	4746.45	2516.75
	255.5	1.30		15542	15542.00	15308.50	1530.85	6277.30	4047.60
ED	255.6	1.40		16015	16015.00	15778.50	1577.85	7855.15	5625.45
2yr	255.7	1.50		16492	16492.00	16253.50	1625.35	9480.50	7250.80
	255.8	1.60	17200		17200.00	16846.00	1684.60	11165.10	8935.40
5yr	255.9	1.70	17462		17462.00	17331.00	1733.10	12898.20	10668.50
10yr	256.0	1.80	17726		17726.00	17594.00	1759.40	14657.60	12427.90
	256.1	1.90	17990		17990.00	17858.00	1785.80	16443.40	14213.70
25yr	256.2	2.00	18256		18256.00	18123.00	1812.30	18255.70	16026.00
50yr	256.3	2.10	18523		18523.00	18389.50	1838.95	20094.65	17864.95
100yr	256.4	2.20	18791		18791.00	18657.00	1865.70	21960.35	19730.65
	256.5	2.30	19060		19060.00	18925.50	1892.55	23852.90	21623.20
	256.6	2.40	19330		19330.00	19195.00	1919.50	25772.40	23542.70
	256.7	2.50	19601		19601.00	19465.50	1946.55	27718.95	25489.25
	256.8	2.60	19873		19873.00	19737.00	1973.70	29692.65	27462.95
	256.9	2.70	20147		20147.00	20010.00	2001.00	31693.65	29463.95
Regional	257.0	2.80	20421		20421.00	20284.00	2028.40	33722.05	31492.35
	257.1	2.90	20697		20697.00	20559.00	2055.90	35777.95	33548.25
Freeboard	257.2	3.00	20973		20973.00	20835.00	2083.50	37861.45	35631.75

Notes

Areas provided from CAD June 28th 2017.

Area 1 includes maincell.

Area 2 includes north forebay, south forebays and plung pool area.

Project: LMB/Blue Sky - SWMF14

Location: City of Barrie

Project #: 300039296

Date: 12-Dec-2016

Updated: 4-Jul-2017



Pond Orifice Sizing Calculations

Perforated Pipe Outlet

The perforated pipe will be sized to ensure that the orifice still controls with 75% blockage of the pipe

Diameter of the Orifice =	180	mm
Area of the Orifice = πr^2 =	0.02545	m ²
Diameter of Perforated Pipe =	300	mm
Length of Pipe =	1.5	m
Circumference of Pipe =	0.942	m

Using 25 mm diameter holes spaced at 75 mm c/c:

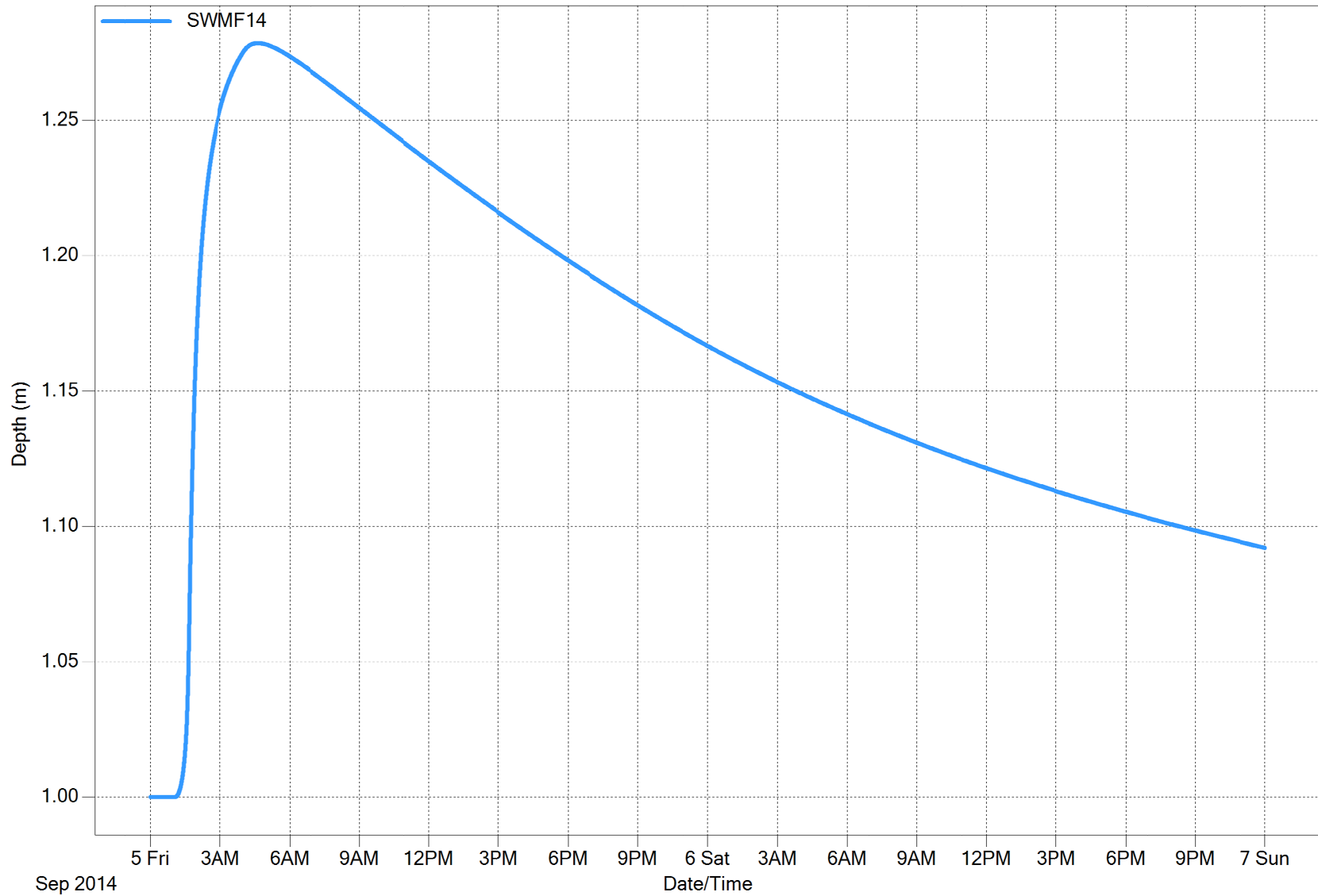
Holes per row (75 mm spacing) =	12	holes/row
Rows per length of pipe (75 mm spacing) =	20	rows
Holes per length of pipe =	240	holes

Area of one 25 mm diameter hole =	0.00049	m ²
Total open area of perforated pipe =	0.1178	m ²

The perforated pipe should provide an opening area greater than 4 x the orifice area

4x Orifice Area =	0.1018	m ²	
0.1178 m ²	>	0.1018 m ²	TRUE

SWMF14 - 25mm Storm Drawdown





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Appendix G

SWMF No. 15

Title: SWMF15 OPTION2 - STONE GALLERY STAGE STORAGE
Project: LM Barrie
RJB# 039296
Date: 7/19/2017
Author: Jordan McIntyre
Checked By: MZ



Stone Porosity 0.4											PCSWMM Parameters	
Description	HWL - Storm	Elevation (m)	Stone Area (sq.m)	Stone Incremental Depth	Depth	Stone Average Area (sq.m)	Stone Incremental Volume (cu.m)	Cumulative Stone Volume (cu.m)	Stone Incremental Void Storage (cu.m)	Cumulative Stone Void Storage (cu.m)	Depth (m)	PCSWMM Storage Area (sq.m)
Stone Invert		256.150	9104	0	0.00			0	0	0	0.000	3642
Stone @ Vertical		256.400	9104	0.25	0.25	9104	2276	2276	910	910	0.250	3642
Stone @ Vertical	25mm CHIC	256.650	9104	0.25	0.50	9104	2276	4552	910	1821	0.500	3642
Stone @ Vertical		256.900	9104	0.25	0.75	9104	2276	6828	910	2731	0.750	3642
Stone @ Vertical	5yr-24hr-SCS	257.150	9104	0.25	1.00	9104	2276	9104	910	3642	1.000	3642
Stone @ Vertical		257.400	9104	0.25	1.25	9104	2276	11381	910	4552	1.250	3642
Stone @ 1to1 slope		257.650	9202	0.25	1.50	9153	2288	13669	915	5468	1.500	3661
Stone @ 1to1 slope	10yr-24hr-SCS	257.900	9300	0.25	1.75	9251	2313	15982	925	6393	1.750	3700
Stone @ 1to1 slope		258.150	9300	0.25	2.00	9300	2325	18307	930	7323	2.000	3720
Stone @ 1to1 slope	25yr-24hr-SCS	258.400	9497	0.25	2.25	9399	2350	20656	940	8262	2.250	3759
Stone @ 1to1 slope		258.650	9597	0.25	2.50	9547	2387	23043	955	9217	2.500	3819
Stone @ 1to1 slope	50yr-24hr-SCS	258.900	9697	0.25	2.75	9647	2412	25455	965	10182	2.750	3859
Stone Obvert	100yr-24hr-SCS	259.150	9797	0.25	3.00	9747	2437	27891	975	11157	3.000	3899
Cover Invert		259.151									3.001	400*
Cover Obvert (FG Grade)		259.650									3.500	401*
Surface Ponding		259.651									3.501	9797**
Surface Ponding	Regional Storm	259.850										
Surface Ponding		260.150									4.000	9797**

Notes

24hr-SCS Storm found to generate the largest storage volumes.

Stone area found using CAD.

"Stone Void Storage" conversion to "PCSWMM Pond Storage Area" provides equivalent stage storage volume. (ie Stone incremental void storage / Stone incremental depth = equivalent area of storage at 1.0 porosity.)

* Arbitrary Area Node representing no storage (Uses 10% of 100 year storage area).

** Facility footprint representing surface ponding directly above facility. Only utilized for Regional Storm emergency weir flow computations.

Project Name: LMB / Blue Sky
Project No.: 300039296
Location: Barrie
Created By: JM
Checked By:
Date Created: 30-Nov-2016
Date Modified: 6/28/2017



User Input Cells

Weir Calculations - Input Parameters	
Width (m) =	20.00
Coefficient, C =	1.60
Rectangular =	n
Side Slope X:1 =	3.00
Crest Elevation (m) =	260.10
Incremental Depth (m) =	0.05

Weir Equation

$$Q = CL(H^{1.5})$$

Notes:

Weir equation applies to sharp crested rectangular and broad crested configurations.

Sharp Crested Rectangular Weir Coefficient, C = 1.84

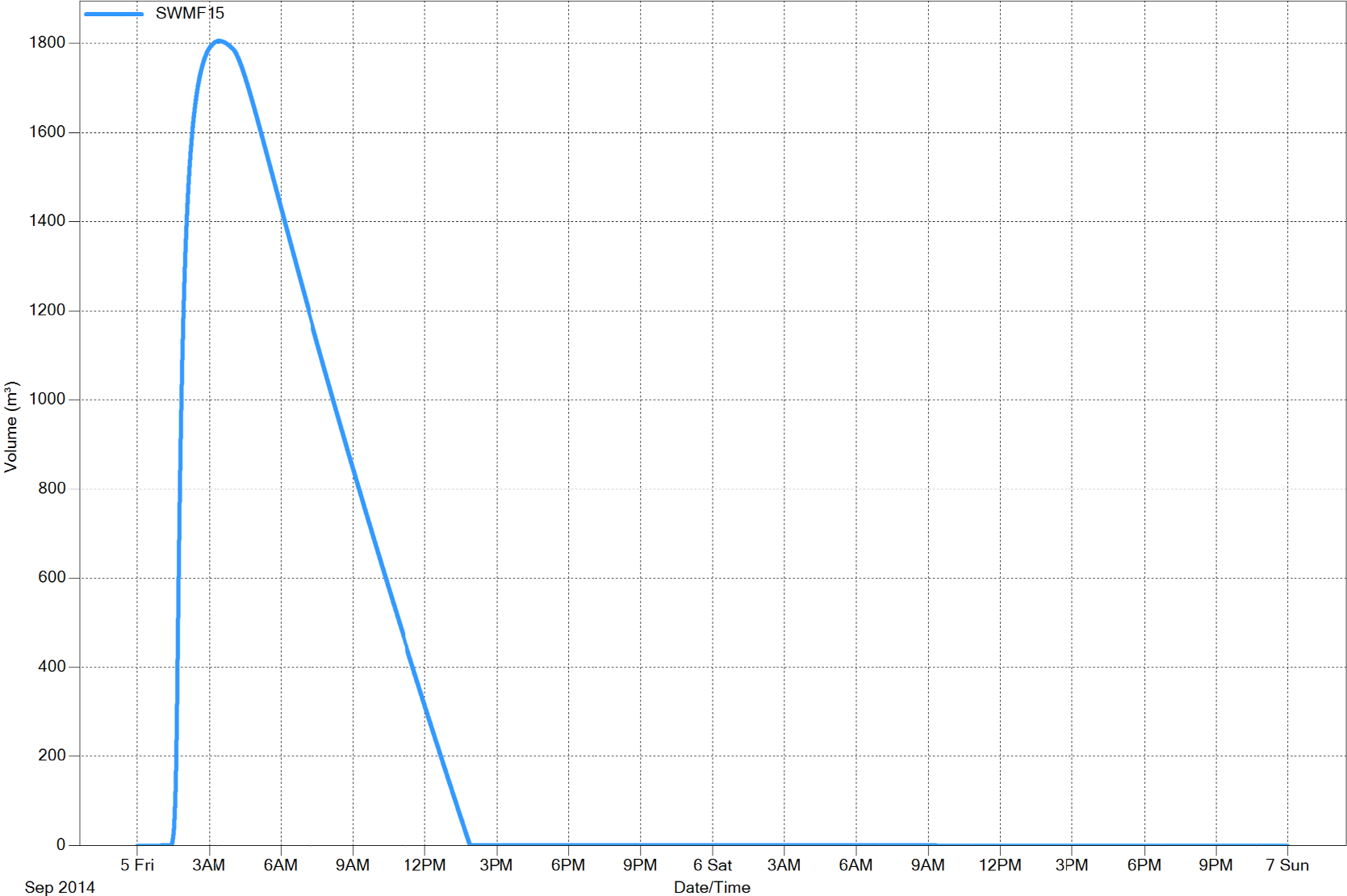
Broad Crested Weir Coefficient, C = f(H, h, and L) ranging between 1.25-3.1

SWMF15 Option 2 (Subsurface Infiltration Basin)

Weir Calculations - Output Results					
W.S. Elevation (m)	Head (m)	Trapezoid Width (m)	Rectangle Width (m)	Weir Q (m ³ /sec)	Water Surface Elevation Notes
260.100	0.000	20.000	20.000	0.000	100-yr Uncontrolled- 5.501m ³ /s
260.150	0.050	20.150	20.000	0.360	
260.200	0.100	20.300	20.000	1.027	
260.250	0.150	20.450	20.000	1.901	
260.300	0.200	20.600	20.000	2.948	
260.350	0.250	20.750	20.000	4.150	
260.400	0.300	20.900	20.000	5.495	
260.450	0.350	21.050	20.000	6.974	
260.500	0.400	21.200	20.000	8.581	

SWMF15 - 25mm Storm Drawdown

Subsurface Infiltration Basin





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Appendix H

SWMF No. 16

Project: **Hewitt's SPA - SWMF16**

Location: City of Barrie
 Project #: 300032860
 Created By: MLZ
 Checked By: PCC
 Date: 5-May-2016
 Updated: 19-Dec-2016



Pond Permanent Pool and Extended Detention Storage

Summary of Land Uses	Area =	Imperviousness =
Site	21.66 ha	12%
TOTAL	21.66 ha	12%
Protection Level	1	Type "1" for Enhanced, "2" for Normal, "3" for Basic
Pond Type	Infiltration	Choose Infiltration, Wetpond, Wetland, or Hybrid
Imperviousness %	12	Table 3.2 Code 1
MOE 2003 Table 3.2 Volume	0 m ³ /ha	
	0 m ³ /ha	Less 40 m ³ /ha for active storage

Type of SWM Facility	Protection Level	Permanent Pool Volume (m ³)	Extended Detention Volume *		Estimated Peak Release Rate (m ³ /s)
			MOE Guideline (40m ³ /ha) (m ³)	25mm Storm Runoff (m ³)	
Infiltration	1	0	866	2840	0.0493

NOTE: - * The greater of the MOE Guideline (40m³/ha) and the 25mm Storm Runoff Volume (PCSWMM) is used as the Extended Detention Volume.
 - The Estimated Peak Release Rate is based on the Extended Detention Volume divided by 24hrs divided by 3600sec multiplied by 1.5.
 - The constant of 1.5 is used to determine the approx. peak release rate from the average release rate.

Project: Hewitt's SPA - SWMF16

Location: City of Barrie

Project #: 300032860

Date: 5-May-2016

Updated: 19-Dec-2016



FOREBAY SIZING CHECK

FOREBAY REQUIREMENTS

INPUT AREA

LENGTH TO WIDTH RATIO (r):	2.0	
PEAK QUALITY STORM RELEASE RATE:	0.0493	m ³ /s
PEAK STORM SEWER DESIGN STORM FLOW INTO POND:	3.04	m ³ /s
PARTICLE SETTLING VELOCITY (v _s):	3.00E-04	m/s 3.00E-4 FOR 150um PARTICLES
FOREBAY DEPTH:	1.50	m
FOREBAY BERM TARGET VELOCITY:	0.5	m/s 0.5 STANDARD

SETTLING LENGTH CALCULATION

FOREBAY LENGTH: 18

DISPERSION LENGTH CALCULATION

FOREBAY LENGTH: 32

FOREBAY DIMENSIONS

FOREBAY LENGTH: 32
FOREBAY WIDTH: 16
FOREBAY DEPTH: 1.50

Project: **Hewitt's SPA - SWMF16**

Location: City of Barrie
 Project #: 300032860
 Date: 5-May-2016
 Updated: 19-Dec-2016



Pond Storage Calculations

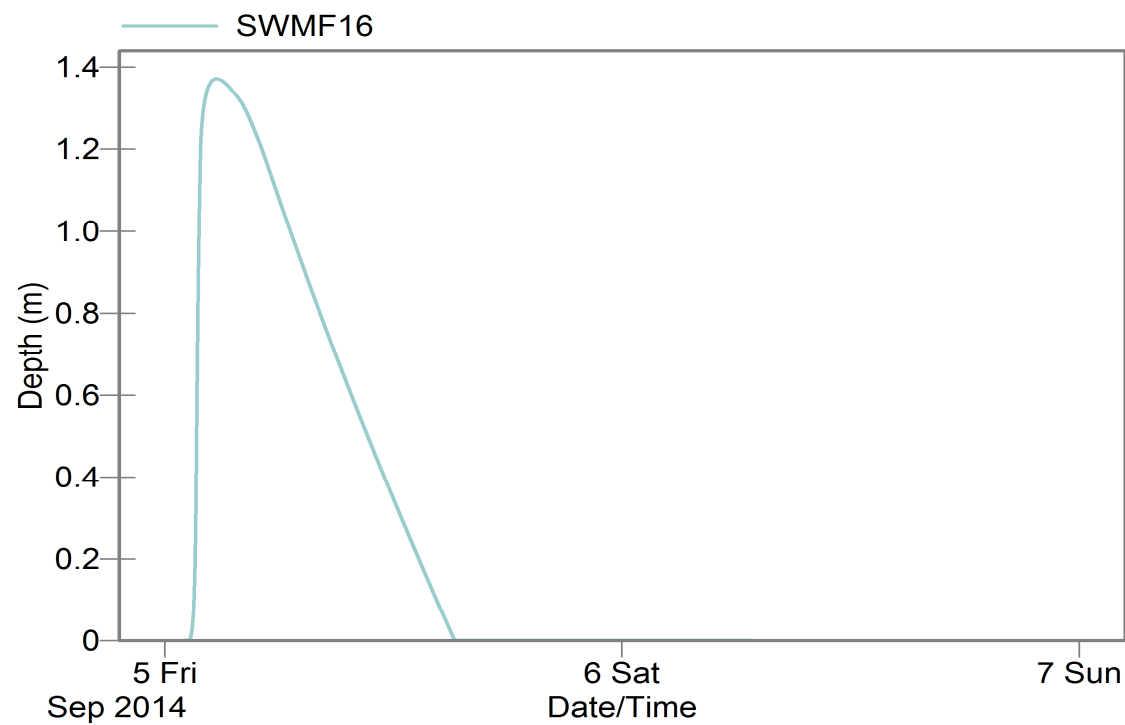
INPUT AREA

Base of Pond: 260.00
 External N.W.L.: 261.30 - Forebay Only
 Increment for Volume: 0.1 m
 Required Permanent Pool Volume: 0.00 m³
 Permanent Pool Volume Provided: 0.00 m³ - Wet Forebay provided, No permanent pool required with infiltration basin design
 Required Extended Detention 2840.00 m³
 Extended Detention Provided 2840.00 m³

ELEVATION / STORAGE INFORMATION

	Elevation	Stage	Area 1	Area 2	Total Area	Avg. Area	Incremental Storage	Cumulative Storage	Cumulative Storage above Permanent Pool
	(m)	(m)	(m ²)	(m ²)	(m ²)	(m ²)	(m ³)	(m ³)	(m ³)
Base of Infiltration	258.80	0.00	1,040.00		1040.00				
	260.00	1.20	1,040.00		1040.00	1040.00	1246.96	1246.96	1246.96
Base of Pond	260.00	1.20	1,684.00		1684.00	1362.00	1.36	1248.32	1248.32
	260.10	1.30	2,735.00		2735.00	2209.50	220.95	1469.27	1469.27
	260.20	1.40	2,836.00		2836.00	2785.50	278.55	1747.82	1747.82
	260.30	1.50	2,939.00		2939.00	2887.50	288.75	2036.57	2036.57
	260.40	1.60	3,043.00		3043.00	2991.00	299.10	2335.67	2335.67
ED = 260.56	260.50	1.70	3,150.00		3150.00	3096.50	309.65	2645.32	2645.32
2-Year = 260.65	260.60	1.80	3,257.00		3257.00	3203.50	320.35	2965.67	2965.67
	260.70	1.90	3,367.00		3367.00	3312.00	331.20	3296.87	3296.87
	260.80	2.00	3,478.00		3478.00	3422.50	342.25	3639.12	3639.12
	260.90	2.10	3,591.00		3591.00	3534.50	353.45	3992.57	3992.57
	261.00	2.20	3,705.00		3705.00	3648.00	364.80	4357.37	4357.37
5-Year = 261.09	261.10	2.30	3,821.00		3821.00	3763.00	376.30	4733.67	4733.67
	261.20	2.40	3,939.00		3939.00	3880.00	388.00	5121.67	5121.67
	261.30	2.50	4,059.00		4059.00	3999.00	395.90	5517.57	5517.57
10-Year = 261.33	261.30	2.50	4,059.00	1074.00	5133.00	4596.00	4.60	5522.17	5522.17
	261.40	2.60	4,180.00	1165.00	5345.00	5239.00	523.90	6046.07	6046.07
25-Year = 261.56	261.50	2.70	4,302.00	1258.00	5560.00	5452.50	545.25	6591.32	6591.32
	261.60	2.80	4,427.00	1353.00	5780.00	5670.00	567.00	7158.32	7158.32
50-Year = 261.73	261.70	2.90	4,553.00	1450.00	6003.00	5891.50	589.15	7747.47	7747.47
	261.80	3.00	6,323.00		6323.00	6163.00	616.30	8363.77	8363.77
100-Year = 261.89	261.90	3.10	6,475.00		6475.00	6399.00	639.90	9003.67	9003.67
	262.00	3.20	6,628.00		6628.00	6551.50	655.15	9658.82	9658.82
	262.10	3.30	6,783.00		6783.00	6705.50	670.55	10329.37	10329.37
	262.20	3.40	6,938.00		6938.00	6860.50	686.05	11015.42	11015.42
Regional = 262.32	262.30	3.50	7,094.00		7094.00	7016.00	701.60	11717.02	11717.02
	262.40	3.60	7,252.00		7252.00	7173.00	717.30	12434.32	12434.32
	262.50	3.70	7,411.00		7411.00	7331.50	733.15	13167.47	13167.47
	262.60	3.80	7,570.00		7570.00	7490.50	749.05	13916.52	13916.52
	262.70	3.90	7,731.00		7731.00	7650.50	765.05	14681.57	14681.57
	262.80	4.00	7,893.00		7893.00	7812.00	781.20	15462.77	15462.77
	262.90	4.10	8,056.00		8056.00	7974.50	797.45	16260.22	16260.22
Freeboard	263.00	4.20	8,220.00		8220.00	8138.00	813.80	17074.02	17074.02
	263.10	4.30	8,384.00		8384.00	8302.00	830.20	17904.22	17904.22
	263.20	4.40	8,551.00		8551.00	8467.50	846.75	18750.97	18750.97
	263.30	4.50	10,603.00		10603.00	9577.00	957.70	19708.67	19708.67

25mm Storm Drawdown





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Appendix I

Post-Development PCSWMM Model

Post Development 100yr 24hr SCS Storm No LIDs for SWMF Design

Untitled

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

PROJECT TITLE: LM Barrie / Blue Sky
PROJECT NO: 300039296
MODEL CREATED BY: R.J.BURNSIDE AND ASSOCIATES LTD

Element Count

Number of rain gages 18
Number of subcatchments ... 16
Number of nodes 29
Number of links 24
Number of pollutants 0
Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
100yr_SCS_24h_Type_II_133.6mm	100yr_SCS_24h_Type_II_133.6mm	INTENSITY	15 min.
100yr_SCS_6h_106.5mm	100yr_SCS_6h_106.5mm	INTENSITY	5 min.
10yr_SCS_24h_Type_II_89.9mm	10yr_SCS_24h_Type_II_89.9mm	INTENSITY	15 min.
10yr_SCS_6h_70.8mm	10y_SCS_6h_70.8mm	INTENSITY	5 min.
25mm	25mm	INTENSITY	5 min.
25mm_SCS_24h_Type_II_25mm	25mm_SCS_24h_Type_II_25mm	INTENSITY	15 min.
25mm_SCS_6h_25mm	25mm_SCS_6h_25mm	INTENSITY	5 min.
25yr_SCS_24h_Type_II_107.5mm	25yr_SCS_24h_Type_II_107.5mm	INTENSITY	15 min.
25yr_SCS_6h_85.2mm	25yr_SCS_6h_85.2mm	INTENSITY	5 min.
2yr_SCS_24h_Type_II_55mm	2yr_SCS_24h_Type_II_55mm	INTENSITY	15 min.
2yr_SCS_6h_42.3mm	2yr_SCS_6h_42.3mm	INTENSITY	5 min.
50yr_SCS_24h_Type_II_120.6mm	50yr_SCS_24h_Type_II_120.6mm	INTENSITY	15 min.
50yr_SCS_6h_95.9mm	50yr_SCS_6h_95.9mm	INTENSITY	5 min.
5yr_SCS_24h_Type_II_76mm	5yr_SCS_24h_Type_II_76mm	INTENSITY	15 min.
5yr_SCS_6h_59.5mm	5yr_SCS_6h_59.5mm	INTENSITY	5 min.
Hurricane_Hazel1_(Southern_Ontario)	Hurricane_Hazel1_(Southern_Ontario)	INTENSITY	60 min.
NO_RAIN	NO_RAIN	INTENSITY	5 min.
SCS_6h_1mm_Jordan	SCS_6h_1mm_Jordan	INTENSITY	5 min.

Subcatchment Summary

Name	Area	width	%Imperv	%Slope	Rain Gage
Outlet					
11b	7.19	199.73	57.00	1.2000	25mm
J41					
14a	11.66	187.41	56.00	1.2000	25mm
SWMF14					
14b	22.50	362.75	49.00	1.2000	25mm
SWMF14					
14-EXT	1.01	32.37	50.00	1.0000	25mm
SWMF14					

15	21.57	431.34	57.00	1.5000	25mm
SWMF15					
15a	5.15	177.74	5.00	1.0000	25mm
SWMF15					
16	20.47	511.78	57.00	1.5000	25mm
SWMF16					
16a	1.65	275.15	35.00	3.0000	25mm
H11a					
16b	1.19	108.41	57.00	0.5000	25mm
SWMF16					
204	0.30	18.91	50.00	2.0000	25mm
H09					
205	0.30	20.24	54.00	2.0000	25mm
H10					
206	1.11	554.80	50.00	2.0000	25mm
S13					
207	0.36	89.88	60.00	1.0000	25mm
S14					
208	0.21	59.91	61.00	0.6000	25mm
H11a					
209	0.45	226.70	50.00	2.0000	25mm
S14					
EXT	3.31	300.87	0.00	3.0000	25mm
S13					

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J36	JUNCTION	255.00	2.50	0.0	
J38	JUNCTION	259.65	0.30	0.0	
J39	JUNCTION	258.62	0.87	0.0	
J41	JUNCTION	253.18	1.98	0.0	
J42	JUNCTION	252.00	1.98	0.0	
J43	JUNCTION	251.75	1.91	0.0	
J44	JUNCTION	251.50	1.46	0.0	
J45	JUNCTION	251.10	2.21	0.0	
J46	JUNCTION	250.71	2.26	0.0	
J47	JUNCTION	250.31	2.67	0.0	
J48	JUNCTION	250.18	2.67	0.0	
J49	JUNCTION	250.18	2.45	0.0	
J50	JUNCTION	250.17	2.20	0.0	
J51	JUNCTION	250.17	1.81	0.0	
J52	JUNCTION	250.17	2.89	0.0	
J53	JUNCTION	250.16	2.99	0.0	
J54	JUNCTION	249.33	3.38	0.0	
J55	JUNCTION	248.65	3.70	0.0	
J56	JUNCTION	246.12	3.70	0.0	
H09	OUTFALL	0.00	0.00	0.0	
H10	OUTFALL	257.66	0.00	0.0	
H11	OUTFALL	0.00	249.45	0.0	
H11a	OUTFALL	0.00	255.81	0.0	
S12	OUTFALL	246.00	2.85	0.0	
S13	OUTFALL	243.90	11.02	0.0	
S14	OUTFALL	251.00	0.00	0.0	
SWMF14	STORAGE	254.20	3.00	0.0	
SWMF15	STORAGE	256.15	3.80	0.0	
SWMF16	STORAGE	258.80	4.50	0.0	

***** Link Summary *****					
Name		From Node	To Node	Type	Length
%Slope	Roughness				

C1		J38	H11	CONDUIT	115.4
9.1375	0.1500				
C12		J39	H11a	CONDUIT	349.1
1.0199	0.0130				
C13		J36	S13	CONDUIT	500.0
0.4000	0.0130				
C2_18		J41	J42	CONDUIT	100.0
1.1801	0.0500				
C2_19		J42	J43	CONDUIT	100.0
0.2500	0.0500				
C2_20		J43	J44	CONDUIT	100.0
0.2500	0.0500				
C2_21		J44	J45	CONDUIT	100.0
0.4000	0.0500				
C2_22		J45	J46	CONDUIT	100.0
0.3900	0.0500				
C2_23		J46	J47	CONDUIT	100.0
0.3980	0.0500				
C2_24		J47	J48	CONDUIT	100.0
0.1290	0.0500				
C2_25		J48	J49	CONDUIT	100.0
0.0060	0.0500				
C2_26		J49	J50	CONDUIT	100.0
0.0030	0.0500				
C2_27		J50	J51	CONDUIT	100.0
0.0030	0.0500				
C2_28		J51	J52	CONDUIT	100.0
0.0030	0.0500				
C2_29		J52	J53	CONDUIT	100.0
0.0030	0.0500				
C2_30		J53	J54	CONDUIT	100.0
0.8310	0.0500				
C2_31		J54	J55	CONDUIT	100.0
0.6840	0.0500				
C2_32		J55	J56	CONDUIT	100.0
2.5308	0.0500				
C2_33		J56	S12	CONDUIT	39.0
0.3075	0.0500				
OR1		SWMF14	J36	ORIFICE	
OR16		SWMF14	J36	ORIFICE	
W1		SWMF14	J36	WEIR	
W11		SWMF15	J38	WEIR	
W12		SWMF16	J39	WEIR	

Cross Section Summary

Full	Full	Hyd.	Max.	No. of		
Conduit	Depth	Rad.	width	Barrels		
Flow	Shape					

***** Transect Summary *****						
Transect 1_1	Area:					
C1	TRAPEZOIDAL	0.30	6.27	0.29	21.80	1
5.49						
C12	CIRCULAR	0.75	0.44	0.19	0.75	1
1.12						
C13	CIRCULAR	1.80	2.54	0.45	1.80	1
7.27						
C2_18	2_18	1.98	95.65	0.96	99.00	1
202.37						
C2_19	2_19	1.91	80.50	0.81	99.00	1
69.88						
C2_20	2_20	1.31	46.13	0.46	98.70	1
27.69						
C2_21	2_21	1.46	50.65	0.51	98.00	1
41.10						
C2_22	2_22	2.21	136.50	1.38	98.40	1
211.41						
C2_23	2_23	2.26	136.62	1.37	99.00	1
212.96						
C2_24	2_24	2.67	123.98	1.24	99.00	1
102.96						
C2_25	2_25	2.45	105.73	1.06	99.00	1
17.03						
C2_26	2_26	2.20	78.67	0.79	99.00	1
7.35						
C2_27	2_28	1.81	60.41	0.61	98.00	1
4.78						
C2_28	2_28	1.81	60.41	0.61	98.00	1
4.78						
C2_29	2_29	2.89	128.35	1.30	98.00	1
16.76						
C2_30	2_30	2.99	116.36	1.18	98.00	1
236.87						
C2_31	2_31	3.38	137.44	1.39	98.00	1
282.67						
C2_32	2_32	3.70	163.81	1.68	98.00	1
735.38						
C2_33	2_33	2.85	104.64	1.18	99.00	1
129.77						

Transect Summary

Transect 1_1

Area:	0.0006	0.0017	0.0032	0.0050	0.0071
	0.0093	0.0119	0.0146	0.0176	0.0209
	0.0244	0.0282	0.0322	0.0365	0.0410
	0.0457	0.0507	0.0558	0.0613	0.0669
	0.0727	0.0788	0.0852	0.0917	0.0985
	0.1056	0.1129	0.1204	0.1282	0.1363
	0.1446	0.1531	0.1620	0.1710	0.1804
	0.1900	0.2026	0.2230	0.2636	0.3155
	0.3720	0.4321	0.4947	0.5600	0.6278
	0.6984	0.7713	0.8462	0.9227	1.0000
Hrad:	0.0438	0.0940	0.1380	0.1838	0.2310
	0.2758	0.3189	0.3608	0.3996	0.4378
	0.4755	0.5130	0.5521	0.5915	0.6305
	0.6691	0.7079	0.7469	0.7856	0.8240
	0.8620	0.8986	0.9351	0.9715	1.0078

			Untitled		
	1.0415	1.0753	1.1092	1.1432	1.1776
	1.2111	1.2447	1.2786	1.3130	1.3475
	1.3816	1.3846	1.3248	1.1644	0.4760
	0.5278	0.5801	0.6326	0.6849	0.7357
width:	0.7850	0.8359	0.8874	0.9431	1.0000
	0.0123	0.0168	0.0212	0.0249	0.0279
	0.0310	0.0340	0.0371	0.0403	0.0436
	0.0469	0.0502	0.0532	0.0562	0.0592
	0.0622	0.0652	0.0681	0.0710	0.0739
	0.0768	0.0798	0.0828	0.0859	0.0889
	0.0922	0.0954	0.0987	0.1019	0.1052
	0.1085	0.1118	0.1151	0.1184	0.1217
	0.1277	0.1977	0.3933	0.6218	0.7018
	0.7519	0.7894	0.8226	0.8544	0.8899
	0.9239	0.9510	0.9751	0.9887	1.0000
Transect 1_10					
Area:	0.0005	0.0017	0.0035	0.0059	0.0088
	0.0123	0.0164	0.0216	0.0283	0.0358
	0.0443	0.0543	0.0662	0.0796	0.0952
	0.1130	0.1334	0.1543	0.1757	0.1974
	0.2195	0.2417	0.2644	0.2872	0.3105
	0.3344	0.3592	0.3842	0.4092	0.4343
	0.4595	0.4850	0.5108	0.5370	0.5634
	0.5902	0.6174	0.6449	0.6728	0.7010
	0.7294	0.7581	0.7872	0.8164	0.8462
Hrad:	0.8762	0.9067	0.9374	0.9686	1.0000
	0.0152	0.0375	0.0501	0.0701	0.0890
	0.1017	0.1196	0.1313	0.1396	0.1599
	0.1686	0.1762	0.1822	0.1890	0.1974
	0.2046	0.2036	0.2310	0.2586	0.2840
	0.3132	0.3415	0.3683	0.3969	0.4213
	0.4477	0.4559	0.4864	0.5168	0.5471
	0.5771	0.5982	0.6225	0.6467	0.6713
	0.6926	0.7136	0.7378	0.7577	0.7836
	0.8089	0.8321	0.8536	0.8799	0.8955
width:	0.9167	0.9392	0.9570	0.9808	1.0000
	0.0312	0.0446	0.0690	0.0839	0.0985
	0.1209	0.1409	0.1938	0.2281	0.2424
	0.2864	0.3405	0.4027	0.4667	0.5224
	0.6209	0.6552	0.6679	0.6793	0.6950
	0.7008	0.7079	0.7178	0.7240	0.7464
	0.7732	0.7879	0.7899	0.7919	0.7939
	0.7962	0.8108	0.8206	0.8303	0.8392
	0.8522	0.8651	0.8741	0.8879	0.8945
	0.9018	0.9110	0.9221	0.9278	0.9450
	0.9558	0.9653	0.9795	0.9875	1.0000
Transect 1_11					
Area:	0.0027	0.0145	0.0287	0.0438	0.0593
	0.0751	0.0913	0.1077	0.1245	0.1415
	0.1586	0.1761	0.1938	0.2116	0.2297
	0.2480	0.2664	0.2851	0.3038	0.3228
	0.3421	0.3618	0.3817	0.4017	0.4220
	0.4425	0.4631	0.4840	0.5051	0.5264
	0.5479	0.5696	0.5915	0.6136	0.6359
	0.6584	0.6812	0.7041	0.7273	0.7506
	0.7742	0.7980	0.8221	0.8467	0.8714

			Untitled		
	0.8964	0.9217	0.9474	0.9734	1.0000
Hrad:	0.0116	0.0288	0.0533	0.0782	0.1040
	0.1280	0.1538	0.1781	0.2018	0.2272
	0.2511	0.2746	0.2989	0.3236	0.3464
	0.3698	0.3940	0.4178	0.4411	0.4634
	0.4810	0.5015	0.5240	0.5460	0.5678
	0.5896	0.6112	0.6326	0.6536	0.6744
	0.6953	0.7160	0.7367	0.7571	0.7770
	0.7974	0.8176	0.8375	0.8570	0.8768
	0.8965	0.9134	0.9245	0.9419	0.9595
width:	0.9770	0.9930	1.0059	1.0164	1.0000
	0.3185	0.5024	0.5390	0.5599	0.5701
	0.5868	0.5939	0.6049	0.6170	0.6229
	0.6319	0.6415	0.6485	0.6541	0.6631
	0.6706	0.6764	0.6824	0.6890	0.6967
	0.7113	0.7215	0.7285	0.7359	0.7432
	0.7506	0.7578	0.7651	0.7729	0.7806
	0.7880	0.7955	0.8030	0.8105	0.8184
	0.8258	0.8332	0.8407	0.8486	0.8561
	0.8636	0.8736	0.8893	0.8989	0.9082
	0.9175	0.9282	0.9418	0.9577	1.0000
Transect 1_12					
Area:	0.0003	0.0010	0.0024	0.0043	0.0067
	0.0099	0.0139	0.0189	0.0248	0.0315
	0.0389	0.0471	0.0562	0.0663	0.0772
	0.0888	0.1011	0.1143	0.1283	0.1432
	0.1588	0.1750	0.1918	0.2095	0.2279
	0.2470	0.2669	0.2876	0.3094	0.3325
	0.3567	0.3819	0.4084	0.4373	0.4689
	0.5020	0.5355	0.5694	0.6035	0.6380
	0.6727	0.7077	0.7431	0.7791	0.8153
Hrad:	0.8518	0.8885	0.9256	0.9627	1.0000
	0.0195	0.0403	0.0548	0.0781	0.0894
	0.1035	0.1166	0.1273	0.1477	0.1681
	0.1876	0.2070	0.2174	0.2370	0.2589
	0.2798	0.2995	0.3146	0.3340	0.3533
	0.3744	0.3989	0.4199	0.4347	0.4561
	0.4779	0.4941	0.5093	0.5205	0.5248
	0.5422	0.5612	0.5490	0.5494	0.5389
	0.5647	0.5967	0.6285	0.6603	0.6919
	0.7234	0.7535	0.7788	0.8087	0.8394
width:	0.8699	0.9004	0.9332	0.9667	1.0000
	0.0140	0.0249	0.0446	0.0552	0.0751
	0.0958	0.1198	0.1491	0.1690	0.1884
	0.2086	0.2287	0.2601	0.2814	0.2998
	0.3189	0.3392	0.3653	0.3863	0.4075
	0.4264	0.4411	0.4593	0.4846	0.5025
	0.5198	0.5431	0.5678	0.5979	0.6371
	0.6617	0.6843	0.7482	0.8006	0.8751
	0.8937	0.9020	0.9100	0.9178	0.9254
	0.9330	0.9419	0.9567	0.9655	0.9730
	0.9806	0.9880	0.9926	0.9963	1.0000
Transect 1_13					
Area:	0.0003	0.0012	0.0025	0.0042	0.0064
	0.0089	0.0118	0.0148	0.0182	0.0217

			Untitled		
	0.0254	0.0295	0.0340	0.0391	0.0449
	0.0514	0.0589	0.0669	0.0755	0.0849
	0.0951	0.1061	0.1178	0.1303	0.1433
	0.1570	0.1713	0.1869	0.2038	0.2220
	0.2416	0.2619	0.2830	0.3051	0.3283
	0.3541	0.3821	0.4111	0.4407	0.4721
	0.5075	0.5465	0.5900	0.6368	0.6867
	0.7405	0.8003	0.8646	0.9315	1.0000
Hrad:					
	0.0353	0.0775	0.1214	0.1461	0.1823
	0.2262	0.2733	0.3181	0.3642	0.4100
	0.4537	0.4696	0.4913	0.5009	0.4973
	0.5047	0.5225	0.5518	0.5781	0.5935
	0.6206	0.6452	0.6680	0.6999	0.7380
	0.7736	0.7895	0.7904	0.8053	0.8024
	0.8277	0.8744	0.9010	0.9311	0.9352
	0.8982	0.9170	0.9655	1.0108	0.9860
	0.9545	0.9051	0.8912	0.9095	0.9138
	0.9105	0.9335	0.9643	1.0131	1.0000
width:					
	0.0097	0.0158	0.0205	0.0285	0.0349
	0.0394	0.0430	0.0466	0.0498	0.0528
	0.0560	0.0627	0.0692	0.0779	0.0901
	0.1019	0.1126	0.1212	0.1306	0.1431
	0.1532	0.1643	0.1763	0.1860	0.1941
	0.2028	0.2169	0.2363	0.2530	0.2766
	0.2919	0.2995	0.3140	0.3276	0.3510
	0.3942	0.4168	0.4259	0.4360	0.4907
	0.5317	0.6040	0.6622	0.7004	0.7516
	0.8245	0.9067	0.9540	0.9869	1.0000
Transect 1_14					
Area:					
	0.0021	0.0068	0.0131	0.0207	0.0297
	0.0393	0.0492	0.0593	0.0696	0.0805
	0.0919	0.1037	0.1159	0.1288	0.1423
	0.1564	0.1708	0.1854	0.2002	0.2154
	0.2309	0.2465	0.2625	0.2787	0.2960
	0.3151	0.3361	0.3581	0.3809	0.4044
	0.4293	0.4556	0.4828	0.5110	0.5393
	0.5678	0.5964	0.6251	0.6539	0.6829
	0.7120	0.7413	0.7713	0.8024	0.8340
	0.8660	0.8988	0.9325	0.9662	1.0000
Hrad:					
	0.0178	0.0430	0.0639	0.0856	0.1064
	0.1360	0.1658	0.1976	0.2291	0.2447
	0.2754	0.3054	0.3342	0.3590	0.3805
	0.4065	0.4328	0.4593	0.4810	0.5038
	0.5297	0.5554	0.5758	0.5852	0.6146
	0.6397	0.6608	0.6815	0.6981	0.7124
	0.6646	0.6873	0.7093	0.6102	0.6417
	0.6731	0.7044	0.7342	0.7638	0.7945
	0.8254	0.8560	0.8829	0.9072	0.9343
	0.9613	0.9798	0.9350	0.9675	1.0000
width:					
	0.1201	0.1589	0.2057	0.2518	0.2796
	0.2895	0.2976	0.3008	0.3063	0.3344
	0.3436	0.3521	0.3721	0.3898	0.4154
	0.4224	0.4284	0.4345	0.4445	0.4536
	0.4603	0.4670	0.4775	0.4836	0.5442
	0.5829	0.6366	0.6627	0.6843	0.7126
	0.7652	0.7919	0.8186	0.8378	0.8408
	0.8439	0.8469	0.8516	0.8563	0.8597

			Untitled		
	0.8627	0.8795	0.9064	0.9328	0.9420
	0.9513	0.9950	0.9975	0.9987	1.0000
Transect 1_15					
Area:					
	0.0010	0.0046	0.0093	0.0147	0.0210
	0.0276	0.0344	0.0416	0.0491	0.0569
	0.0650	0.0732	0.0818	0.0906	0.0997
	0.1090	0.1186	0.1287	0.1390	0.1502
	0.1630	0.1780	0.1944	0.2120	0.2315
	0.2537	0.2784	0.3056	0.3349	0.3648
	0.3950	0.4258	0.4569	0.4882	0.5195
	0.5509	0.5823	0.6138	0.6454	0.6770
	0.7087	0.7405	0.7723	0.8042	0.8363
	0.8684	0.9008	0.9335	0.9665	1.0000
Hrad:					
	0.0127	0.0383	0.0617	0.0826	0.1090
	0.1369	0.1648	0.1895	0.2136	0.2394
	0.2664	0.2911	0.3139	0.3393	0.3637
	0.3834	0.4025	0.4218	0.4416	0.4591
	0.4702	0.4775	0.4801	0.4875	0.4498
	0.4447	0.4147	0.4117	0.3776	0.4055
	0.4335	0.4592	0.4886	0.5210	0.5534
	0.5856	0.6179	0.6501	0.6819	0.7137
	0.7454	0.7770	0.8085	0.8394	0.8702
	0.9008	0.9293	0.9552	0.9816	1.0000
width:					
	0.0831	0.1194	0.1480	0.1758	0.1897
	0.1984	0.2058	0.2162	0.2264	0.2341
	0.2401	0.2477	0.2566	0.2629	0.2698
	0.2798	0.2902	0.3003	0.3100	0.3526
	0.4055	0.4657	0.4996	0.5362	0.6216
	0.6839	0.7760	0.8389	0.8734	0.8859
	0.8974	0.9130	0.9208	0.9225	0.9242
	0.9258	0.9275	0.9292	0.9312	0.9332
	0.9353	0.9373	0.9394	0.9421	0.9458
	0.9510	0.9583	0.9679	0.9788	1.0000
Transect 1_16					
Area:					
	0.0005	0.0012	0.0020	0.0030	0.0040
	0.0051	0.0072	0.0122	0.0195	0.0283
	0.0382	0.0492	0.0612	0.0740	0.0877
	0.1030	0.1204	0.1389	0.1581	0.1789
	0.2015	0.2257	0.2508	0.2761	0.3016
	0.3271	0.3529	0.3788	0.4049	0.4313
	0.4579	0.4847	0.5117	0.5389	0.5663
	0.5938	0.6216	0.6495	0.6776	0.7059
	0.7345	0.7632	0.7922	0.8214	0.8507
	0.8803	0.9101	0.9400	0.9699	1.0000
Hrad:					
	0.0217	0.0471	0.0701	0.0915	0.1118
	0.1305	0.0979	0.0799	0.0860	0.0992
	0.1145	0.1301	0.1492	0.1684	0.1871
	0.1995	0.2027	0.2228	0.2416	0.2455
	0.2654	0.2730	0.3006	0.3288	0.3571
	0.3850	0.4127	0.4394	0.4653	0.4908
	0.5174	0.5438	0.5701	0.5959	0.6218
	0.6475	0.6732	0.6986	0.7237	0.7486
	0.7733	0.7973	0.8211	0.8451	0.8693
	0.8938	0.9189	0.9460	0.9730	1.0000
width:					
	0.0225	0.0259	0.0292	0.0326	0.0359

		Untitled			
	0.0394	0.1164	0.2135	0.2762	0.3109
	0.3451	0.3821	0.4119	0.4409	0.4705
	0.5523	0.5966	0.6254	0.6569	0.7310
	0.7757	0.8295	0.8370	0.8422	0.8468
	0.8519	0.8572	0.8641	0.8722	0.8806
	0.8868	0.8930	0.8992	0.9057	0.9121
	0.9183	0.9245	0.9308	0.9373	0.9439
	0.9506	0.9580	0.9655	0.9725	0.9791
	0.9853	0.9907	0.9938	0.9969	1.0000

Transect 1_17

Area:	0.0007	0.0022	0.0044	0.0073	0.0107
	0.0146	0.0190	0.0241	0.0296	0.0355
	0.0419	0.0489	0.0564	0.0646	0.0737
	0.0838	0.0957	0.1100	0.1260	0.1433
	0.1623	0.1831	0.2054	0.2298	0.2563
	0.2836	0.3113	0.3392	0.3671	0.3952
	0.4233	0.4516	0.4800	0.5084	0.5369
	0.5655	0.5941	0.6229	0.6519	0.6812
	0.7109	0.7409	0.7715	0.8025	0.8340
	0.8659	0.8984	0.9314	0.9652	1.0000

Hrad:	0.0231	0.0415	0.0617	0.0810	0.1031
	0.1252	0.1424	0.1621	0.1833	0.2039
	0.2240	0.2447	0.2669	0.2778	0.2971
	0.3129	0.3197	0.3266	0.3356	0.3440
	0.3516	0.3624	0.3708	0.3795	0.3579
	0.3671	0.4017	0.4363	0.4707	0.5051
	0.5394	0.5737	0.6078	0.6335	0.6680
	0.7024	0.7359	0.7647	0.7927	0.8202
	0.8467	0.8676	0.8899	0.9112	0.9327
	0.9547	0.9737	0.9930	0.9988	1.0000

width:	0.0308	0.0528	0.0712	0.0895	0.1037
	0.1165	0.1337	0.1484	0.1613	0.1741
	0.1894	0.2045	0.2176	0.2397	0.2754
	0.3023	0.3695	0.4275	0.4706	0.5107
	0.5628	0.6053	0.6473	0.7314	0.7579
	0.7786	0.7821	0.7855	0.7888	0.7918
	0.7948	0.7978	0.8008	0.8025	0.8038
	0.8050	0.8072	0.8144	0.8224	0.8305
	0.8395	0.8539	0.8668	0.8806	0.8941
	0.9070	0.9227	0.9380	0.9663	1.0000

Transect 1_18

Area:	0.0011	0.0031	0.0058	0.0100	0.0156
	0.0226	0.0310	0.0407	0.0518	0.0645
	0.0788	0.0952	0.1139	0.1331	0.1525
	0.1722	0.1921	0.2123	0.2327	0.2534
	0.2742	0.2954	0.3168	0.3386	0.3608
	0.3833	0.4061	0.4291	0.4525	0.4761
	0.5000	0.5241	0.5485	0.5732	0.5982
	0.6236	0.6492	0.6750	0.7010	0.7273
	0.7538	0.7805	0.8073	0.8343	0.8615
	0.8888	0.9163	0.9441	0.9720	1.0000

Hrad:	0.0182	0.0397	0.0566	0.0697	0.0812
	0.0918	0.1053	0.1189	0.1303	0.1428
	0.1512	0.1563	0.1679	0.1936	0.2198
	0.2442	0.2691	0.2942	0.3189	0.3432
	0.3668	0.3909	0.4119	0.4328	0.4544

		Untitled			
	0.4756	0.4979	0.5196	0.5409	0.5640
	0.5869	0.6068	0.6277	0.6489	0.6655
	0.6888	0.7076	0.7317	0.7565	0.7728
	0.7965	0.8198	0.8435	0.8667	0.8891
	0.9109	0.9321	0.9535	0.9768	1.0000

width:	0.0619	0.0786	0.1257	0.1720	0.2274
	0.2736	0.3211	0.3676	0.4246	0.4789
	0.5506	0.6303	0.6784	0.6875	0.6940
	0.7052	0.7140	0.7218	0.7299	0.7382
	0.7476	0.7557	0.7691	0.7825	0.7939
	0.8059	0.8155	0.8260	0.8366	0.8443
	0.8519	0.8636	0.8738	0.8834	0.8989
	0.9053	0.9174	0.9226	0.9267	0.9411
	0.9464	0.9521	0.9571	0.9626	0.9689
	0.9757	0.9831	0.9901	0.9950	1.0000

Transect 1_19

Area:	0.0013	0.0104	0.0246	0.0394	0.0546
	0.0702	0.0862	0.1026	0.1193	0.1362
	0.1534	0.1708	0.1884	0.2065	0.2249
	0.2434	0.2622	0.2811	0.3002	0.3195
	0.3389	0.3586	0.3785	0.3985	0.4187
	0.4392	0.4598	0.4806	0.5017	0.5230
	0.5445	0.5662	0.5881	0.6103	0.6327
	0.6554	0.6783	0.7015	0.7249	0.7487
	0.7727	0.7969	0.8213	0.8459	0.8708
	0.8959	0.9213	0.9470	0.9732	1.0000

Hrad:	0.0088	0.0225	0.0467	0.0727	0.0981
	0.1232	0.1485	0.1708	0.1967	0.2218
	0.2457	0.2702	0.2939	0.3127	0.3368
	0.3617	0.3861	0.4096	0.4333	0.4567
	0.4793	0.5027	0.5258	0.5487	0.5701
	0.5919	0.6140	0.6359	0.6562	0.6771
	0.6984	0.7196	0.7389	0.7578	0.7769
	0.7956	0.8148	0.8339	0.8500	0.8683
	0.8895	0.9088	0.9269	0.9467	0.9665
	0.9822	0.9975	1.0128	1.0198	1.0000

width:	0.1509	0.4631	0.5261	0.5419	0.5567
	0.5702	0.5803	0.6011	0.6068	0.6145
	0.6244	0.6324	0.6414	0.6605	0.6679
	0.6732	0.6792	0.6864	0.6928	0.6996
	0.7072	0.7134	0.7198	0.7263	0.7346
	0.7420	0.7490	0.7559	0.7646	0.7725
	0.7796	0.7868	0.7960	0.8053	0.8145
	0.8238	0.8325	0.8412	0.8529	0.8623
	0.8687	0.8768	0.8861	0.8936	0.9009
	0.9121	0.9236	0.9351	0.9543	1.0000

Transect 1_2

Area:	0.0004	0.0015	0.0029	0.0047	0.0069
	0.0094	0.0122	0.0154	0.0189	0.0227
	0.0268	0.0313	0.0361	0.0411	0.0464
	0.0521	0.0582	0.0647	0.0715	0.0788
	0.0867	0.0956	0.1049	0.1153	0.1272
	0.1404	0.1554	0.1723	0.1910	0.2114
	0.2337	0.2578	0.2837	0.3114	0.3410
	0.3723	0.4055	0.4404	0.4772	0.5158
	0.5561	0.5983	0.6424	0.6882	0.7358

			Untitled		
Hrad:	0.7853	0.8365	0.8896	0.9443	1.0000
	0.0306	0.0662	0.0985	0.1328	0.1652
	0.1969	0.2282	0.2589	0.2885	0.3188
	0.3488	0.3785	0.4102	0.4430	0.4753
	0.4952	0.5170	0.5420	0.5649	0.5852
	0.5965	0.5837	0.6182	0.5734	0.5719
	0.5561	0.5460	0.5437	0.5470	0.5545
	0.5652	0.5784	0.5936	0.6105	0.6287
	0.6480	0.6682	0.6892	0.7109	0.7332
	0.7560	0.7793	0.8029	0.8269	0.8512
width:	0.8758	0.9006	0.9256	0.9598	1.0000
	0.0143	0.0219	0.0294	0.0355	0.0416
	0.0475	0.0534	0.0592	0.0652	0.0709
	0.0766	0.0823	0.0875	0.0923	0.0972
	0.1046	0.1119	0.1186	0.1259	0.1340
	0.1493	0.1630	0.1689	0.2003	0.2215
	0.2517	0.2840	0.3162	0.3485	0.3807
	0.4129	0.4452	0.4774	0.5097	0.5419
	0.5741	0.6064	0.6386	0.6709	0.7031
	0.7353	0.7676	0.7998	0.8321	0.8643
	0.8965	0.9288	0.9610	0.9839	1.0000

Transect 1_20

Area:	0.0017	0.0056	0.0108	0.0175	0.0253
	0.0343	0.0446	0.0566	0.0698	0.0842
	0.0997	0.1163	0.1337	0.1520	0.1709
	0.1905	0.2104	0.2303	0.2503	0.2704
	0.2907	0.3110	0.3314	0.3519	0.3726
	0.3934	0.4144	0.4356	0.4569	0.4784
	0.5001	0.5219	0.5440	0.5665	0.5892
	0.6122	0.6356	0.6593	0.6834	0.7079
	0.7330	0.7587	0.7851	0.8122	0.8405
	0.8699	0.9006	0.9324	0.9656	1.0000

Hrad:	0.0190	0.0423	0.0624	0.0839	0.1064
	0.1268	0.1413	0.1571	0.1786	0.1974
	0.2181	0.2398	0.2635	0.2885	0.3112
	0.3389	0.3721	0.4051	0.4379	0.4704
	0.5029	0.5352	0.5668	0.5979	0.6280
	0.6574	0.6866	0.7156	0.7443	0.7729
	0.8012	0.8266	0.8504	0.8728	0.8950
	0.9163	0.9380	0.9604	0.9776	0.9889
	1.0003	1.0130	1.0186	1.0182	1.0099
	1.0051	0.9988	0.9968	0.9904	1.0000

width:	0.0913	0.1330	0.1762	0.2120	0.2415
	0.2740	0.3203	0.3651	0.3963	0.4325
	0.4635	0.4917	0.5146	0.5342	0.5569
	0.5699	0.5726	0.5754	0.5782	0.5811
	0.5837	0.5864	0.5897	0.5933	0.5976
	0.6024	0.6071	0.6120	0.6168	0.6215
	0.6264	0.6333	0.6414	0.6503	0.6594
	0.6690	0.6782	0.6868	0.6991	0.7157
	0.7325	0.7486	0.7701	0.7972	0.8319
	0.8651	0.9014	0.9353	0.9749	1.0000

Transect 1_21

Area:	0.0030	0.0081	0.0147	0.0225	0.0316
	0.0417	0.0529	0.0651	0.0782	0.0922

			Untitled		
	0.1069	0.1222	0.1381	0.1549	0.1722
	0.1902	0.2086	0.2274	0.2465	0.2658
	0.2855	0.3056	0.3260	0.3467	0.3678
	0.3893	0.4111	0.4333	0.4557	0.4786
	0.5018	0.5254	0.5492	0.5734	0.5978
	0.6225	0.6475	0.6728	0.6984	0.7242
	0.7503	0.7766	0.8032	0.8300	0.8573
	0.8850	0.9130	0.9415	0.9705	1.0000
Hrad:	0.0211	0.0410	0.0610	0.0796	0.0982
	0.1161	0.1343	0.1536	0.1702	0.1915
	0.2119	0.2333	0.2528	0.2695	0.2901
	0.3110	0.3334	0.3578	0.3816	0.4050
	0.4281	0.4496	0.4715	0.4926	0.5140
	0.5357	0.5566	0.5779	0.5988	0.6169
	0.6393	0.6591	0.6808	0.7026	0.7247
	0.7450	0.7661	0.7872	0.8087	0.8304
	0.8521	0.8740	0.8949	0.9134	0.9288
	0.9459	0.9612	0.9745	0.9876	1.0000
width:	0.1470	0.1983	0.2407	0.2828	0.3214
	0.3596	0.3944	0.4242	0.4598	0.4818
	0.5047	0.5242	0.5466	0.5748	0.5938
	0.6117	0.6258	0.6357	0.6459	0.6566
	0.6670	0.6797	0.6914	0.7040	0.7157
	0.7268	0.7387	0.7498	0.7612	0.7759
	0.7851	0.7972	0.8068	0.8161	0.8249
	0.8356	0.8452	0.8547	0.8636	0.8721
	0.8805	0.8886	0.8974	0.9088	0.9231
	0.9355	0.9499	0.9662	0.9827	1.0000

Transect 1_22

Area:	0.0013	0.0037	0.0068	0.0106	0.0151
	0.0205	0.0270	0.0346	0.0433	0.0530
	0.0635	0.0750	0.0874	0.1008	0.1150
	0.1301	0.1461	0.1630	0.1808	0.1994
	0.2186	0.2386	0.2592	0.2804	0.3024
	0.3250	0.3483	0.3724	0.3971	0.4225
	0.4480	0.4735	0.4992	0.5249	0.5508
	0.5768	0.6029	0.6294	0.6563	0.6837
	0.7116	0.7403	0.7698	0.8000	0.8309
	0.8624	0.8946	0.9277	0.9627	1.0000

Hrad:	0.0256	0.0510	0.0757	0.0974	0.1178
	0.1315	0.1447	0.1617	0.1803	0.2001
	0.2214	0.2393	0.2613	0.2777	0.2998
	0.3203	0.3388	0.3588	0.3797	0.4019
	0.4267	0.4497	0.4738	0.4961	0.5182
	0.5416	0.5630	0.5834	0.6050	0.6341
	0.6698	0.7054	0.7407	0.7752	0.8096
	0.8437	0.8740	0.8980	0.9182	0.9399
	0.9577	0.9632	0.9792	0.9915	1.0116
	1.0271	1.0402	1.0380	1.0067	1.0000

width:	0.0515	0.0728	0.0904	0.1094	0.1292
	0.1573	0.1881	0.2159	0.2423	0.2670
	0.2892	0.3160	0.3372	0.3656	0.3866
	0.4094	0.4345	0.4578	0.4798	0.5000
	0.5164	0.5346	0.5512	0.5696	0.5880
	0.6047	0.6234	0.6431	0.6613	0.6710
	0.6732	0.6753	0.6776	0.6804	0.6833
	0.6862	0.6920	0.7028	0.7164	0.7288

			Untitled		
	0.7442	0.7696	0.7870	0.8075	0.8217
	0.8398	0.8600	0.8936	0.9562	1.0000
Transect 1_23					
Area:					
	0.0010	0.0035	0.0070	0.0115	0.0170
	0.0237	0.0318	0.0427	0.0545	0.0668
	0.0797	0.0931	0.1070	0.1215	0.1365
	0.1520	0.1681	0.1847	0.2019	0.2196
	0.2378	0.2566	0.2759	0.2957	0.3161
	0.3370	0.3585	0.3805	0.4030	0.4261
	0.4497	0.4738	0.4985	0.5237	0.5494
	0.5757	0.6025	0.6299	0.6578	0.6862
	0.7152	0.7447	0.7747	0.8053	0.8364
	0.8681	0.9003	0.9330	0.9662	1.0000
Hrad:					
	0.0190	0.0384	0.0601	0.0775	0.0945
	0.1111	0.1190	0.1257	0.1533	0.1800
	0.2059	0.2311	0.2556	0.2797	0.3032
	0.3263	0.3489	0.3713	0.3932	0.4149
	0.4364	0.4575	0.4784	0.4992	0.5197
	0.5400	0.5602	0.5802	0.6001	0.6199
	0.6395	0.6590	0.6784	0.6977	0.7169
	0.7360	0.7550	0.7740	0.7928	0.8116
	0.8304	0.8490	0.8676	0.8862	0.9047
	0.9231	0.9415	0.9599	0.9782	1.0000
width:					
	0.0543	0.0901	0.1158	0.1479	0.1796
	0.2131	0.2675	0.3395	0.3554	0.3712
	0.3870	0.4028	0.4186	0.4344	0.4502
	0.4660	0.4819	0.4977	0.5135	0.5293
	0.5451	0.5609	0.5767	0.5925	0.6084
	0.6242	0.6400	0.6558	0.6716	0.6874
	0.7032	0.7191	0.7349	0.7507	0.7665
	0.7823	0.7981	0.8139	0.8297	0.8456
	0.8614	0.8772	0.8930	0.9088	0.9246
	0.9404	0.9562	0.9721	0.9879	1.0000
Transect 1_24					
Area:					
	0.0004	0.0016	0.0033	0.0056	0.0084
	0.0119	0.0160	0.0206	0.0258	0.0315
	0.0378	0.0448	0.0524	0.0609	0.0706
	0.0815	0.0937	0.1070	0.1212	0.1365
	0.1525	0.1696	0.1877	0.2067	0.2265
	0.2472	0.2688	0.2914	0.3151	0.3396
	0.3649	0.3911	0.4180	0.4460	0.4749
	0.5045	0.5348	0.5660	0.5979	0.6305
	0.6639	0.6979	0.7328	0.7684	0.8050
	0.8425	0.8808	0.9200	0.9598	1.0000
Hrad:					
	0.0228	0.0441	0.0644	0.0881	0.1087
	0.1265	0.1487	0.1705	0.1911	0.2130
	0.2268	0.2492	0.2636	0.2662	0.2803
	0.2892	0.2956	0.3114	0.3313	0.3529
	0.3681	0.3873	0.4096	0.4296	0.4529
	0.4711	0.4906	0.5093	0.5289	0.5495
	0.5727	0.5936	0.6130	0.6344	0.6549
	0.6798	0.7002	0.7264	0.7479	0.7710
	0.7945	0.8174	0.8394	0.8572	0.8780
	0.8967	0.9187	0.9381	0.9674	1.0000
width:					
	0.0196	0.0354	0.0513	0.0638	0.0775

			Untitled		
	0.0943	0.1076	0.1208	0.1349	0.1476
	0.1665	0.1795	0.1987	0.2287	0.2518
	0.2817	0.3169	0.3434	0.3659	0.3866
	0.4144	0.4380	0.4583	0.4811	0.5000
	0.5247	0.5479	0.5722	0.5957	0.6180
	0.6372	0.6589	0.6820	0.7032	0.7252
	0.7422	0.7639	0.7792	0.7995	0.8179
	0.8357	0.8539	0.8730	0.8965	0.9170
	0.9397	0.9588	0.9807	0.9922	1.0000
Transect 1_25					
Area:					
	0.0003	0.0015	0.0034	0.0062	0.0097
	0.0141	0.0192	0.0251	0.0318	0.0393
	0.0476	0.0566	0.0664	0.0770	0.0884
	0.1005	0.1135	0.1272	0.1416	0.1567
	0.1726	0.1894	0.2069	0.2253	0.2446
	0.2647	0.2857	0.3076	0.3303	0.3539
	0.3783	0.4036	0.4297	0.4567	0.4845
	0.5132	0.5427	0.5731	0.6043	0.6363
	0.6693	0.7029	0.7375	0.7728	0.8089
	0.8457	0.8832	0.9216	0.9606	1.0000
Hrad:					
	0.0179	0.0391	0.0570	0.0768	0.0982
	0.1158	0.1372	0.1581	0.1783	0.1963
	0.2182	0.2396	0.2582	0.2775	0.2979
	0.3186	0.3374	0.3580	0.3786	0.3991
	0.4181	0.4380	0.4555	0.4739	0.4928
	0.5075	0.5284	0.5455	0.5652	0.5824
	0.6026	0.6222	0.6419	0.6594	0.6787
	0.6987	0.7184	0.7360	0.7582	0.7731
	0.7963	0.8154	0.8352	0.8585	0.8767
	0.9009	0.9200	0.9436	0.9681	1.0000
width:					
	0.0183	0.0373	0.0600	0.0805	0.0989
	0.1216	0.1401	0.1590	0.1784	0.2004
	0.2181	0.2363	0.2573	0.2775	0.2967
	0.3155	0.3363	0.3552	0.3738	0.3927
	0.4129	0.4323	0.4542	0.4754	0.4962
	0.5216	0.5407	0.5640	0.5845	0.6077
	0.6279	0.6488	0.6695	0.6927	0.7139
	0.7345	0.7555	0.7787	0.7971	0.8232
	0.8406	0.8622	0.8832	0.9002	0.9228
	0.9388	0.9601	0.9767	0.9922	1.0000
Transect 1_3					
Area:					
	0.0017	0.0052	0.0097	0.0148	0.0205
	0.0265	0.0327	0.0392	0.0461	0.0534
	0.0614	0.0699	0.0790	0.0889	0.0993
	0.1104	0.1223	0.1348	0.1481	0.1622
	0.1770	0.1925	0.2089	0.2260	0.2440
	0.2627	0.2823	0.3026	0.3235	0.3457
	0.3691	0.3941	0.4203	0.4476	0.4759
	0.5054	0.5358	0.5671	0.5995	0.6330
	0.6672	0.7022	0.7377	0.7736	0.8099
	0.8467	0.8841	0.9220	0.9606	1.0000
Hrad:					
	0.0253	0.0494	0.0806	0.1086	0.1400
	0.1733	0.2057	0.2338	0.2577	0.2782
	0.2962	0.3178	0.3319	0.3488	0.3683
	0.3841	0.3996	0.4159	0.4315	0.4492
	0.4639	0.4814	0.4976	0.5140	0.5298

			Untitled		
	0.5464	0.5648	0.5866	0.6010	0.6033
	0.6112	0.6127	0.6261	0.6419	0.6577
	0.6729	0.6922	0.7113	0.7238	0.7435
	0.7688	0.7938	0.8236	0.8544	0.8844
	0.9105	0.9373	0.9630	0.9821	1.0000
width:	0.0663	0.1048	0.1207	0.1363	0.1464
	0.1526	0.1588	0.1675	0.1787	0.1921
	0.2073	0.2199	0.2381	0.2547	0.2697
	0.2874	0.3059	0.3241	0.3432	0.3609
	0.3814	0.3999	0.4197	0.4396	0.4604
	0.4808	0.4998	0.5157	0.5381	0.5729
	0.6038	0.6431	0.6712	0.6973	0.7236
	0.7510	0.7740	0.7972	0.8282	0.8513
	0.8679	0.8846	0.8958	0.9054	0.9158
	0.9300	0.9432	0.9573	0.9781	1.0000
Transect 1_4					
Area:	0.0011	0.0033	0.0060	0.0094	0.0136
	0.0184	0.0240	0.0303	0.0374	0.0454
	0.0540	0.0632	0.0732	0.0837	0.0949
	0.1069	0.1196	0.1329	0.1467	0.1611
	0.1761	0.1918	0.2083	0.2257	0.2437
	0.2626	0.2823	0.3028	0.3241	0.3463
	0.3693	0.3931	0.4180	0.4437	0.4703
	0.4977	0.5262	0.5554	0.5857	0.6168
	0.6489	0.6821	0.7164	0.7518	0.7885
	0.8268	0.8669	0.9088	0.9531	1.0000
Hrad:	0.0321	0.0647	0.0968	0.1177	0.1445
	0.1729	0.1944	0.2185	0.2409	0.2634
	0.2921	0.3140	0.3435	0.3725	0.3960
	0.4144	0.4417	0.4721	0.5020	0.5264
	0.5522	0.5763	0.5883	0.6125	0.6375
	0.6533	0.6766	0.6982	0.7153	0.7370
	0.7616	0.7757	0.7942	0.8191	0.8369
	0.8575	0.8790	0.8982	0.9200	0.9395
	0.9575	0.9728	0.9916	1.0056	1.0136
	1.0187	1.0172	1.0194	1.0071	1.0000
width:	0.0356	0.0512	0.0622	0.0798	0.0941
	0.1066	0.1235	0.1387	0.1551	0.1720
	0.1845	0.2010	0.2127	0.2244	0.2391
	0.2575	0.2703	0.2810	0.2917	0.3054
	0.3183	0.3321	0.3534	0.3678	0.3817
	0.4013	0.4166	0.4330	0.4524	0.4692
	0.4842	0.5061	0.5257	0.5411	0.5613
	0.5798	0.5980	0.6178	0.6360	0.6560
	0.6772	0.7006	0.7220	0.7471	0.7775
	0.8113	0.8520	0.8913	0.9462	1.0000
Transect 1_5					
Area:	0.0012	0.0034	0.0065	0.0103	0.0148
	0.0201	0.0262	0.0330	0.0405	0.0488
	0.0578	0.0675	0.0779	0.0891	0.1010
	0.1136	0.1269	0.1409	0.1557	0.1712
	0.1875	0.2044	0.2220	0.2403	0.2593
	0.2792	0.2999	0.3215	0.3439	0.3672
	0.3913	0.4163	0.4420	0.4685	0.4959
	0.5242	0.5534	0.5835	0.6145	0.6461
	0.6785	0.7114	0.7450	0.7793	0.8143

			Untitled		
	0.8500	0.8862	0.9231	0.9608	1.0000
Hrad:	0.0260	0.0513	0.0753	0.0993	0.1215
	0.1425	0.1651	0.1855	0.2078	0.2285
	0.2499	0.2699	0.2923	0.3116	0.3326
	0.3531	0.3749	0.3958	0.4149	0.4343
	0.4562	0.4782	0.4993	0.5201	0.5393
	0.5547	0.5715	0.5899	0.6073	0.6255
	0.6435	0.6624	0.6829	0.7023	0.7186
	0.7363	0.7527	0.7705	0.7931	0.8149
	0.8395	0.8634	0.8854	0.9073	0.9302
	0.9545	0.9782	1.0005	1.0169	1.0000
width:	0.0445	0.0659	0.0857	0.1035	0.1221
	0.1414	0.1587	0.1780	0.1951	0.2135
	0.2311	0.2500	0.2665	0.2857	0.3035
	0.3216	0.3384	0.3559	0.3751	0.3941
	0.4108	0.4272	0.4444	0.4616	0.4805
	0.5030	0.5244	0.5446	0.5660	0.5867
	0.6078	0.6281	0.6469	0.6668	0.6898
	0.7116	0.7349	0.7571	0.7745	0.7926
	0.8079	0.8236	0.8411	0.8587	0.8752
	0.8902	0.9058	0.9225	0.9447	1.0000
Transect 1_6					
Area:	0.0013	0.0038	0.0068	0.0102	0.0142
	0.0186	0.0237	0.0297	0.0363	0.0436
	0.0517	0.0605	0.0701	0.0805	0.0921
	0.1045	0.1180	0.1324	0.1476	0.1636
	0.1803	0.1977	0.2160	0.2351	0.2551
	0.2759	0.2975	0.3200	0.3433	0.3674
	0.3925	0.4183	0.4448	0.4723	0.5006
	0.5295	0.5591	0.5892	0.6199	0.6511
	0.6829	0.7154	0.7486	0.7822	0.8164
	0.8512	0.8866	0.9232	0.9610	1.0000
Hrad:	0.0253	0.0539	0.0827	0.1096	0.1337
	0.1537	0.1696	0.1850	0.2058	0.2253
	0.2393	0.2588	0.2777	0.2909	0.3012
	0.3190	0.3326	0.3522	0.3738	0.3955
	0.4164	0.4372	0.4552	0.4738	0.4942
	0.5135	0.5317	0.5507	0.5717	0.5902
	0.6089	0.6303	0.6501	0.6683	0.6884
	0.7128	0.7393	0.7643	0.7897	0.8141
	0.8412	0.8581	0.8824	0.9120	0.9347
	0.9554	0.9759	0.9830	0.9822	1.0000
width:	0.0517	0.0700	0.0819	0.0933	0.1058
	0.1210	0.1399	0.1603	0.1764	0.1934
	0.2158	0.2338	0.2525	0.2767	0.3055
	0.3276	0.3547	0.3759	0.3949	0.4135
	0.4328	0.4521	0.4744	0.4962	0.5161
	0.5371	0.5594	0.5809	0.6004	0.6224
	0.6444	0.6635	0.6840	0.7065	0.7270
	0.7427	0.7561	0.7707	0.7848	0.7997
	0.8117	0.8336	0.8482	0.8576	0.8733
	0.8907	0.9084	0.9391	0.9784	1.0000
Transect 1_7					
Area:	0.0003	0.0011	0.0025	0.0055	0.0089
	0.0126	0.0168	0.0217	0.0274	0.0341

			Untitled		
	0.0416	0.0500	0.0592	0.0693	0.0803
	0.0921	0.1049	0.1184	0.1328	0.1481
	0.1643	0.1810	0.1983	0.2163	0.2351
	0.2546	0.2751	0.2961	0.3179	0.3407
	0.3643	0.3887	0.4140	0.4402	0.4672
	0.4953	0.5242	0.5541	0.5850	0.6170
	0.6498	0.6836	0.7185	0.7546	0.7919
	0.8307	0.8712	0.9131	0.9561	1.0000
Hrad:					
	0.0224	0.0492	0.0486	0.0750	0.1101
	0.1416	0.1659	0.1795	0.1936	0.2124
	0.2304	0.2501	0.2696	0.2886	0.3106
	0.3281	0.3520	0.3731	0.3938	0.4124
	0.4389	0.4681	0.4959	0.5184	0.5407
	0.5592	0.5839	0.6106	0.6275	0.6465
	0.6667	0.6882	0.7088	0.7287	0.7468
	0.7640	0.7859	0.8028	0.8176	0.8380
	0.8599	0.8756	0.8909	0.9096	0.9177
	0.9198	0.9297	0.9448	0.9677	1.0000
width:					
	0.0142	0.0231	0.0573	0.0732	0.0807
	0.0890	0.1010	0.1206	0.1415	0.1604
	0.1805	0.1997	0.2194	0.2400	0.2584
	0.2808	0.2978	0.3173	0.3372	0.3592
	0.3743	0.3868	0.3999	0.4172	0.4348
	0.4553	0.4711	0.4849	0.5066	0.5269
	0.5464	0.5649	0.5841	0.6041	0.6257
	0.6483	0.6671	0.6902	0.7156	0.7364
	0.7558	0.7808	0.8066	0.8298	0.8631
	0.9034	0.9374	0.9668	0.9883	1.0000
Transect 1_8					
Area:					
	0.0002	0.0009	0.0020	0.0034	0.0054
	0.0080	0.0116	0.0156	0.0206	0.0262
	0.0321	0.0382	0.0446	0.0510	0.0577
	0.0644	0.0713	0.0785	0.0859	0.0948
	0.1052	0.1166	0.1301	0.1453	0.1609
	0.1788	0.1999	0.2222	0.2472	0.2749
	0.3041	0.3349	0.3668	0.3994	0.4328
	0.4667	0.5010	0.5356	0.5708	0.6063
	0.6424	0.6789	0.7159	0.7531	0.7909
	0.8302	0.8710	0.9132	0.9565	1.0000
Hrad:					
	0.0221	0.0452	0.0672	0.0952	0.1062
	0.1084	0.1324	0.1572	0.1675	0.2000
	0.2300	0.2668	0.3026	0.3393	0.3761
	0.4120	0.4424	0.4705	0.4969	0.4126
	0.4249	0.4342	0.3809	0.4124	0.4453
	0.3854	0.3987	0.4276	0.4043	0.4197
	0.4458	0.4639	0.4952	0.5255	0.5621
	0.5943	0.6336	0.6731	0.7039	0.7384
	0.7707	0.8053	0.8412	0.8787	0.9139
	0.9455	0.9744	0.9969	0.9592	1.0000
width:					
	0.0101	0.0189	0.0294	0.0356	0.0514
	0.0742	0.0874	0.0995	0.1232	0.1310
	0.1396	0.1434	0.1474	0.1506	0.1535
	0.1566	0.1615	0.1670	0.1736	0.2301
	0.2480	0.2796	0.3421	0.3528	0.3617
	0.4645	0.5022	0.5264	0.6123	0.6557
	0.6831	0.7229	0.7416	0.7610	0.7708
	0.7860	0.7914	0.7964	0.8114	0.8215

			Untitled		
	0.8339	0.8435	0.8513	0.8572	0.8824
	0.9227	0.9521	0.9827	0.9973	1.0000
Transect 1_9					
Area:					
	0.0002	0.0007	0.0014	0.0041	0.0075
	0.0116	0.0178	0.0270	0.0378	0.0497
	0.0624	0.0760	0.0912	0.1072	0.1243
	0.1422	0.1611	0.1808	0.2008	0.2214
	0.2423	0.2637	0.2856	0.3079	0.3308
	0.3542	0.3781	0.4026	0.4276	0.4533
	0.4794	0.5058	0.5324	0.5590	0.5858
	0.6126	0.6395	0.6665	0.6936	0.7207
	0.7480	0.7755	0.8030	0.8307	0.8586
	0.8866	0.9146	0.9429	0.9713	1.0000
Hrad:					
	0.0153	0.0358	0.0375	0.0352	0.0600
	0.0745	0.0761	0.0883	0.1061	0.1270
	0.1471	0.1674	0.1831	0.1993	0.2175
	0.2320	0.2499	0.2622	0.2844	0.3081
	0.3301	0.3508	0.3719	0.3927	0.4124
	0.4316	0.4501	0.4678	0.4856	0.5045
	0.5249	0.5507	0.5768	0.6028	0.6298
	0.6567	0.6836	0.7104	0.7361	0.7616
	0.7872	0.8122	0.8366	0.8605	0.8849
	0.9100	0.9349	0.9568	0.9787	1.0000
width:					
	0.0139	0.0193	0.0366	0.1157	0.1260
	0.1694	0.2682	0.3502	0.3980	0.4288
	0.4555	0.4992	0.5440	0.5748	0.6070
	0.6429	0.6710	0.6905	0.7074	0.7198
	0.7352	0.7530	0.7691	0.7856	0.8034
	0.8220	0.8414	0.8621	0.8822	0.9000
	0.9150	0.9200	0.9243	0.9286	0.9314
	0.9340	0.9366	0.9392	0.9431	0.9472
	0.9509	0.9554	0.9605	0.9658	0.9706
	0.9746	0.9785	0.9856	0.9926	1.0000
Transect 2_1					
Area:					
	0.0013	0.0039	0.0074	0.0120	0.0174
	0.0235	0.0305	0.0382	0.0468	0.0562
	0.0667	0.0781	0.0907	0.1042	0.1190
	0.1353	0.1532	0.1729	0.1935	0.2144
	0.2358	0.2575	0.2795	0.3019	0.3247
	0.3480	0.3715	0.3952	0.4194	0.4438
	0.4686	0.4937	0.5191	0.5449	0.5709
	0.5972	0.6240	0.6510	0.6782	0.7059
	0.7339	0.7621	0.7907	0.8197	0.8490
	0.8786	0.9085	0.9389	0.9694	1.0000
Hrad:					
	0.0209	0.0387	0.0564	0.0744	0.0932
	0.1097	0.1291	0.1429	0.1621	0.1715
	0.1874	0.1985	0.2157	0.2257	0.2384
	0.2408	0.2476	0.2595	0.2868	0.3124
	0.3361	0.3607	0.3870	0.4097	0.4325
	0.4573	0.4832	0.5084	0.5298	0.5536
	0.5758	0.6006	0.6238	0.6468	0.6713
	0.6877	0.7124	0.7372	0.7593	0.7775
	0.8033	0.8202	0.8439	0.8634	0.8867
	0.9061	0.9249	0.9469	0.9735	1.0000
width:					
	0.0655	0.1008	0.1319	0.1616	0.1865

			Untitled		
	0.2147	0.2364	0.2678	0.2889	0.3278
	0.3564	0.3939	0.4208	0.4620	0.4995
	0.5622	0.6193	0.6667	0.6751	0.6869
	0.7020	0.7143	0.7228	0.7374	0.7513
	0.7614	0.7691	0.7778	0.7919	0.8020
	0.8143	0.8224	0.8325	0.8427	0.8506
	0.8687	0.8761	0.8833	0.8934	0.9082
	0.9137	0.9293	0.9372	0.9495	0.9576
	0.9697	0.9823	0.9916	0.9958	1.0000
Transect 2_10					
Area:	0.0005	0.0017	0.0037	0.0060	0.0087
	0.0118	0.0155	0.0196	0.0242	0.0293
	0.0351	0.0416	0.0489	0.0588	0.0700
	0.0828	0.0969	0.1128	0.1306	0.1504
	0.1720	0.1951	0.2194	0.2443	0.2697
	0.2952	0.3210	0.3470	0.3732	0.3996
	0.4261	0.4529	0.4798	0.5069	0.5343
	0.5618	0.5895	0.6174	0.6456	0.6740
	0.7027	0.7318	0.7611	0.7909	0.8212
	0.8522	0.8849	0.9208	0.9593	1.0000
Hrad:	0.0239	0.0437	0.0696	0.0976	0.1261
	0.1473	0.1648	0.1873	0.2071	0.2245
	0.2356	0.2533	0.2511	0.2267	0.2442
	0.2566	0.2696	0.2839	0.2867	0.3037
	0.3185	0.3406	0.3687	0.4040	0.4400
	0.4788	0.5158	0.5523	0.5898	0.6271
	0.6645	0.7014	0.7375	0.7734	0.8095
	0.8452	0.8804	0.9156	0.9492	0.9802
	1.0099	1.0420	1.0705	1.0942	1.1120
	1.1304	1.0854	1.0209	1.0091	1.0000
width:	0.0195	0.0394	0.0524	0.0617	0.0693
	0.0803	0.0937	0.1044	0.1164	0.1302
	0.1486	0.1638	0.1945	0.2591	0.2866
	0.3225	0.3594	0.3970	0.4554	0.4951
	0.5400	0.5729	0.5950	0.6047	0.6128
	0.6165	0.6222	0.6281	0.6326	0.6370
	0.6411	0.6455	0.6504	0.6552	0.6598
	0.6645	0.6694	0.6741	0.6798	0.6873
	0.6956	0.7020	0.7107	0.7226	0.7383
	0.7536	0.8151	0.9019	0.9506	1.0000
Transect 2_11					
Area:	0.0009	0.0029	0.0060	0.0101	0.0150
	0.0205	0.0268	0.0337	0.0412	0.0492
	0.0576	0.0664	0.0757	0.0856	0.0963
	0.1076	0.1196	0.1323	0.1456	0.1594
	0.1738	0.1888	0.2046	0.2212	0.2387
	0.2570	0.2760	0.2961	0.3172	0.3392
	0.3623	0.3867	0.4121	0.4385	0.4659
	0.4943	0.5234	0.5533	0.5842	0.6160
	0.6488	0.6829	0.7182	0.7545	0.7927
	0.8329	0.8738	0.9152	0.9573	1.0000
Hrad:	0.0262	0.0516	0.0740	0.0932	0.1240
	0.1506	0.1759	0.2008	0.2285	0.2583
	0.2882	0.3165	0.3424	0.3569	0.3764
	0.3974	0.4184	0.4383	0.4635	0.4883
	0.5081	0.5277	0.5489	0.5608	0.5827

			Untitled		
	0.6038	0.6218	0.6415	0.6612	0.6804
	0.6950	0.7068	0.7281	0.7458	0.7659
	0.7867	0.8102	0.8278	0.8501	0.8695
	0.8839	0.9018	0.9210	0.9345	0.9364
	0.8835	0.9150	0.9457	0.9736	1.0000
width:	0.0343	0.0569	0.0807	0.1081	0.1210
	0.1364	0.1523	0.1677	0.1803	0.1904
	0.1998	0.2098	0.2210	0.2398	0.2558
	0.2709	0.2859	0.3018	0.3141	0.3263
	0.3419	0.3578	0.3735	0.3975	0.4146
	0.4320	0.4540	0.4776	0.4990	0.5229
	0.5506	0.5797	0.6007	0.6242	0.6471
	0.6666	0.6838	0.7067	0.7261	0.7481
	0.7749	0.8056	0.8292	0.8619	0.9079
	0.9427	0.9548	0.9677	0.9832	1.0000
Transect 2_12					
Area:	0.0011	0.0034	0.0069	0.0110	0.0157
	0.0211	0.0269	0.0334	0.0406	0.0484
	0.0570	0.0662	0.0762	0.0867	0.0978
	0.1093	0.1216	0.1343	0.1475	0.1613
	0.1756	0.1902	0.2053	0.2211	0.2377
	0.2552	0.2734	0.2924	0.3123	0.3328
	0.3540	0.3761	0.3992	0.4233	0.4482
	0.4740	0.5007	0.5285	0.5581	0.5889
	0.6207	0.6533	0.6870	0.7237	0.7659
	0.8096	0.8549	0.9013	0.9492	1.0000
Hrad:	0.0302	0.0593	0.0935	0.1287	0.1613
	0.1954	0.2260	0.2534	0.2820	0.3064
	0.3302	0.3565	0.3845	0.4159	0.4474
	0.4767	0.5026	0.5351	0.5658	0.5958
	0.6275	0.6615	0.6917	0.7067	0.7205
	0.7407	0.7588	0.7787	0.8011	0.8273
	0.8444	0.8610	0.8765	0.8960	0.9131
	0.9332	0.9543	0.9543	0.9523	0.9739
	0.9988	1.0212	1.0307	1.0330	0.9178
	0.9355	0.9707	0.9910	0.9973	1.0000
width:	0.0341	0.0563	0.0715	0.0831	0.0951
	0.1050	0.1160	0.1285	0.1401	0.1537
	0.1679	0.1808	0.1928	0.2029	0.2126
	0.2232	0.2353	0.2442	0.2536	0.2633
	0.2721	0.2796	0.2886	0.3042	0.3209
	0.3350	0.3504	0.3652	0.3791	0.3912
	0.4078	0.4249	0.4430	0.4595	0.4775
	0.4942	0.5105	0.5388	0.5703	0.5885
	0.6047	0.6226	0.6486	0.7279	0.8116
	0.8413	0.8557	0.8834	0.9241	1.0000
Transect 2_13					
Area:	0.0008	0.0027	0.0051	0.0085	0.0133
	0.0196	0.0272	0.0360	0.0456	0.0559
	0.0668	0.0783	0.0903	0.1029	0.1160
	0.1297	0.1440	0.1588	0.1743	0.1903
	0.2070	0.2245	0.2426	0.2612	0.2806
	0.3008	0.3217	0.3433	0.3656	0.3888
	0.4128	0.4380	0.4642	0.4914	0.5195
	0.5483	0.5776	0.6076	0.6381	0.6690
	0.7003	0.7322	0.7644	0.7970	0.8300

			Untitled		
Hrad:	0.8634	0.8971	0.9312	0.9655	1.0000
	0.0174	0.0435	0.0644	0.0754	0.0816
	0.0985	0.1149	0.1371	0.1590	0.1844
	0.2078	0.2327	0.2562	0.2802	0.3021
	0.3242	0.3455	0.3661	0.3867	0.4054
	0.4234	0.4407	0.4604	0.4813	0.4931
	0.5117	0.5292	0.5468	0.5604	0.5753
	0.5863	0.5958	0.6067	0.6176	0.6365
	0.6579	0.6796	0.6998	0.7233	0.7476
	0.7696	0.7928	0.8187	0.8437	0.8666
width:	0.8908	0.9155	0.9409	0.9705	1.0000
	0.0456	0.0618	0.0808	0.1139	0.1647
	0.2013	0.2395	0.2655	0.2900	0.3067
	0.3251	0.3401	0.3564	0.3712	0.3882
	0.4044	0.4212	0.4384	0.4553	0.4744
	0.4942	0.5147	0.5325	0.5485	0.5751
	0.5941	0.6143	0.6344	0.6593	0.6830
	0.7117	0.7430	0.7733	0.8042	0.8245
	0.8412	0.8572	0.8751	0.8885	0.9006
	0.9153	0.9283	0.9379	0.9483	0.9608
	0.9718	0.9818	0.9911	0.9955	1.0000

Transect 2_14

Area:	0.0005	0.0019	0.0037	0.0060	0.0089
	0.0125	0.0168	0.0220	0.0284	0.0360
	0.0446	0.0547	0.0658	0.0778	0.0907
	0.1043	0.1186	0.1336	0.1494	0.1660
	0.1833	0.2013	0.2198	0.2390	0.2588
	0.2793	0.3004	0.3222	0.3448	0.3680
	0.3919	0.4166	0.4420	0.4681	0.4949
	0.5226	0.5510	0.5802	0.6103	0.6415
	0.6739	0.7069	0.7409	0.7756	0.8115
Hrad:	0.8480	0.8851	0.9229	0.9613	1.0000

	0.0221	0.0455	0.0703	0.0898	0.1075
	0.1240	0.1391	0.1471	0.1580	0.1744
	0.1860	0.1999	0.2216	0.2444	0.2678
	0.2922	0.3165	0.3376	0.3603	0.3836
	0.4064	0.4310	0.4554	0.4792	0.5029
	0.5245	0.5473	0.5677	0.5880	0.6106
	0.6310	0.6498	0.6711	0.6915	0.7096
	0.7281	0.7490	0.7648	0.7790	0.7875
	0.8069	0.8208	0.8438	0.8578	0.8736
width:	0.8975	0.9202	0.9424	0.9691	1.0000

	0.0248	0.0413	0.0529	0.0671	0.0834
	0.1013	0.1215	0.1500	0.1808	0.2073
	0.2413	0.2749	0.2985	0.3201	0.3405
	0.3588	0.3767	0.3979	0.4171	0.4353
	0.4536	0.4696	0.4853	0.5015	0.5174
	0.5353	0.5518	0.5706	0.5895	0.6059
	0.6245	0.6446	0.6621	0.6805	0.7013
	0.7216	0.7396	0.7627	0.7877	0.8191
	0.8393	0.8651	0.8813	0.9071	0.9314
	0.9468	0.9634	0.9804	0.9925	1.0000

Transect 2_15

Area:	0.0002	0.0013	0.0033	0.0056	0.0081
	0.0110	0.0146	0.0197	0.0266	0.0353

			Untitled		
	0.0459	0.0575	0.0702	0.0841	0.0991
	0.1154	0.1326	0.1504	0.1690	0.1882
	0.2080	0.2282	0.2489	0.2700	0.2915
	0.3134	0.3358	0.3586	0.3818	0.4054
	0.4294	0.4537	0.4785	0.5037	0.5293
	0.5554	0.5819	0.6091	0.6367	0.6650
	0.6943	0.7248	0.7563	0.7888	0.8221
	0.8562	0.8909	0.9265	0.9630	1.0000
Hrad:	0.0184	0.0301	0.0575	0.0872	0.1134
	0.1280	0.1306	0.1205	0.1266	0.1362
	0.1538	0.1769	0.1972	0.2164	0.2364
	0.2569	0.2817	0.3080	0.3336	0.3599
	0.3869	0.4158	0.4445	0.4723	0.4994
	0.5267	0.5539	0.5810	0.6078	0.6352
	0.6627	0.6894	0.7134	0.7383	0.7624
	0.7858	0.8074	0.8273	0.8505	0.8606
	0.8681	0.8700	0.8811	0.8927	0.9080
width:	0.9276	0.9440	0.9574	0.9739	1.0000
	0.0113	0.0466	0.0577	0.0638	0.0710
	0.0854	0.1112	0.1632	0.2104	0.2654
	0.2990	0.3255	0.3566	0.3891	0.4199
	0.4497	0.4713	0.4891	0.5073	0.5237
	0.5382	0.5496	0.5606	0.5723	0.5844
	0.5958	0.6070	0.6179	0.6288	0.6388
	0.6484	0.6586	0.6711	0.6827	0.6947
	0.7072	0.7212	0.7367	0.7491	0.7733
	0.8003	0.8338	0.8591	0.8843	0.9062
	0.9238	0.9445	0.9686	0.9893	1.0000

Transect 2_16

Area:	0.0018	0.0057	0.0109	0.0176	0.0255
	0.0345	0.0448	0.0562	0.0691	0.0832
	0.0989	0.1156	0.1332	0.1518	0.1712
	0.1914	0.2121	0.2333	0.2547	0.2763
	0.2981	0.3202	0.3424	0.3647	0.3872
	0.4099	0.4328	0.4559	0.4791	0.5024
	0.5259	0.5495	0.5733	0.5973	0.6214
	0.6457	0.6701	0.6946	0.7193	0.7441
	0.7690	0.7941	0.8194	0.8448	0.8703
Hrad:	0.8959	0.9217	0.9476	0.9738	1.0000

	0.0160	0.0319	0.0485	0.0638	0.0791
	0.0944	0.1089	0.1217	0.1351	0.1461
	0.1599	0.1770	0.1938	0.2109	0.2263
	0.2459	0.2669	0.2881	0.3115	0.3350
	0.3579	0.3810	0.4043	0.4278	0.4510
	0.4731	0.4960	0.5190	0.5423	0.5654
	0.5872	0.6091	0.6311	0.6541	0.6769
	0.6987	0.7205	0.7427	0.7649	0.7874
	0.8095	0.8298	0.8515	0.8737	0.8956
	0.9171	0.9379	0.9578	0.9789	1.0000

width:	0.1152	0.1772	0.2249	0.2754	0.3219
	0.3655	0.4111	0.4623	0.5113	0.5693
	0.6185	0.6529	0.6878	0.7198	0.7566
	0.7785	0.7950	0.8100	0.8179	0.8251
	0.8330	0.8404	0.8470	0.8527	0.8588
	0.8666	0.8727	0.8785	0.8834	0.8887
	0.8956	0.9023	0.9086	0.9133	0.9181
	0.9242	0.9301	0.9353	0.9404	0.9450

	0.9500	0.9570	Untitled	0.9669	0.9717
	0.9769	0.9828	0.9623	0.9894	0.9947
			0.9894	0.9947	1.0000
Transect 2_17					
Area:	0.0014	0.0045	0.0089	0.0143	0.0206
	0.0280	0.0363	0.0457	0.0559	0.0672
	0.0793	0.0923	0.1062	0.1208	0.1361
	0.1521	0.1689	0.1863	0.2043	0.2230
	0.2423	0.2621	0.2824	0.3033	0.3246
	0.3465	0.3690	0.3919	0.4153	0.4391
	0.4633	0.4881	0.5133	0.5390	0.5650
	0.5915	0.6185	0.6459	0.6738	0.7021
	0.7308	0.7598	0.7891	0.8186	0.8484
	0.8784	0.9086	0.9389	0.9694	1.0000
Hrad:	0.0186	0.0365	0.0558	0.0756	0.0921
	0.1102	0.1257	0.1431	0.1601	0.1757
	0.1939	0.2108	0.2285	0.2483	0.2673
	0.2844	0.3034	0.3236	0.3420	0.3605
	0.3806	0.4009	0.4213	0.4418	0.4607
	0.4795	0.4995	0.5200	0.5410	0.5609
	0.5803	0.6001	0.6195	0.6404	0.6603
	0.6795	0.6993	0.7172	0.7356	0.7557
	0.7769	0.8009	0.8245	0.8460	0.8712
	0.8966	0.9229	0.9490	0.9746	1.0000
width:	0.0763	0.1241	0.1601	0.1891	0.2240
	0.2541	0.2889	0.3192	0.3494	0.3825
	0.4093	0.4380	0.4648	0.4868	0.5093
	0.5351	0.5569	0.5758	0.5976	0.6187
	0.6366	0.6538	0.6704	0.6865	0.7047
	0.7229	0.7387	0.7537	0.7676	0.7829
	0.7985	0.8134	0.8286	0.8416	0.8557
	0.8706	0.8845	0.9006	0.9160	0.9291
	0.9407	0.9487	0.9570	0.9677	0.9739
	0.9797	0.9845	0.9894	0.9947	1.0000
Transect 2_18					
Area:	0.0007	0.0019	0.0034	0.0051	0.0071
	0.0091	0.0114	0.0138	0.0163	0.0189
	0.0217	0.0246	0.0277	0.0312	0.0351
	0.0394	0.0442	0.0497	0.0564	0.0658
	0.0778	0.0926	0.1094	0.1280	0.1483
	0.1703	0.1942	0.2199	0.2476	0.2768
	0.3075	0.3393	0.3718	0.4049	0.4386
	0.4728	0.5074	0.5425	0.5780	0.6140
	0.6504	0.6873	0.7246	0.7625	0.8008
	0.8396	0.8790	0.9188	0.9592	1.0000
Hrad:	0.0279	0.0552	0.0869	0.1160	0.1434
	0.1725	0.2016	0.2298	0.2571	0.2836
	0.3095	0.3348	0.3598	0.3843	0.4083
	0.3529	0.3534	0.3443	0.2889	0.2499
	0.2370	0.2378	0.2531	0.2705	0.2873
	0.3053	0.3216	0.3373	0.3565	0.3789
	0.4037	0.4314	0.4653	0.4980	0.5306
	0.5639	0.5977	0.6318	0.6635	0.6967
	0.7288	0.7609	0.7912	0.8220	0.8535
	0.8823	0.9115	0.9410	0.9706	1.0000
width:	0.0242	0.0345	0.0393	0.0441	0.0490

	0.0527	0.0560	Untitled	0.0627	0.0660
	0.0693	0.0726	0.0807	0.0895	0.0985
	0.1105	0.1239	0.1432	0.1943	0.2623
	0.3276	0.3886	0.4316	0.4725	0.5157
	0.5575	0.6034	0.6516	0.6941	0.7303
	0.7615	0.7863	0.7989	0.8130	0.8264
	0.8382	0.8488	0.8585	0.8710	0.8812
	0.8923	0.9032	0.9158	0.9276	0.9382
	0.9515	0.9643	0.9764	0.9882	1.0000
Transect 2_19					
Area:	0.0013	0.0030	0.0050	0.0071	0.0095
	0.0121	0.0148	0.0177	0.0208	0.0240
	0.0273	0.0308	0.0344	0.0381	0.0421
	0.0462	0.0505	0.0550	0.0598	0.0650
	0.0708	0.0774	0.0852	0.0944	0.1059
	0.1206	0.1406	0.1659	0.1943	0.2247
	0.2558	0.2877	0.3203	0.3537	0.3880
	0.4230	0.4589	0.4956	0.5331	0.5714
	0.6105	0.6504	0.6912	0.7328	0.7753
	0.8186	0.8627	0.9076	0.9534	1.0000
Hrad:	0.0386	0.0776	0.1130	0.1467	0.1799
	0.2131	0.2459	0.2775	0.3098	0.3419
	0.3732	0.4039	0.4339	0.4594	0.4840
	0.5084	0.5327	0.5527	0.5611	0.5568
	0.5332	0.5014	0.4719	0.4312	0.3836
	0.3347	0.2776	0.2893	0.3067	0.3436
	0.3813	0.4193	0.4558	0.4914	0.5261
	0.5602	0.5945	0.6284	0.6615	0.6942
	0.7259	0.7579	0.7889	0.8196	0.8503
	0.8802	0.9110	0.9416	0.9705	1.0000
width:	0.0339	0.0388	0.0438	0.0485	0.0527
	0.0564	0.0599	0.0633	0.0665	0.0694
	0.0724	0.0753	0.0783	0.0820	0.0859
	0.0898	0.0937	0.0983	0.1053	0.1153
	0.1314	0.1531	0.1792	0.2177	0.2748
	0.3593	0.5058	0.5730	0.6332	0.6532
	0.6703	0.6856	0.7022	0.7194	0.7371
	0.7548	0.7717	0.7884	0.8056	0.8228
	0.8408	0.8579	0.8759	0.8940	0.9116
	0.9299	0.9469	0.9639	0.9823	1.0000
Transect 2_2					
Area:	0.0171	0.0343	0.0519	0.0696	0.0874
	0.1054	0.1235	0.1418	0.1602	0.1786
	0.1971	0.2158	0.2345	0.2534	0.2725
	0.2916	0.3107	0.3300	0.3494	0.3689
	0.3886	0.4084	0.4282	0.4481	0.4681
	0.4883	0.5086	0.5291	0.5495	0.5701
	0.5908	0.6116	0.6326	0.6536	0.6746
	0.6958	0.7171	0.7384	0.7599	0.7814
	0.8029	0.8246	0.8463	0.8681	0.8899
	0.9118	0.9338	0.9558	0.9779	1.0000
Hrad:	0.0221	0.0435	0.0653	0.0867	0.1080
	0.1294	0.1503	0.1711	0.1927	0.2142
	0.2351	0.2556	0.2756	0.2958	0.3164
	0.3375	0.3585	0.3779	0.3970	0.4165
	0.4363	0.4570	0.4776	0.4967	0.5150

			Untitled		
	0.5337	0.5526	0.5730	0.5932	0.6123
	0.6304	0.6480	0.6666	0.6885	0.7077
	0.7250	0.7447	0.7644	0.7841	0.8034
	0.8228	0.8423	0.8615	0.8808	0.9000
width:	0.9198	0.9399	0.9600	0.9800	1.0000
	0.7727	0.7901	0.7953	0.8025	0.8097
	0.8150	0.8222	0.8288	0.8315	0.8342
	0.8387	0.8442	0.8513	0.8568	0.8612
	0.8640	0.8668	0.8733	0.8802	0.8860
	0.8909	0.8938	0.8967	0.9023	0.9091
	0.9150	0.9205	0.9235	0.9265	0.9312
	0.9373	0.9440	0.9490	0.9494	0.9534
	0.9598	0.9629	0.9661	0.9692	0.9727
	0.9758	0.9790	0.9824	0.9856	0.9888
	0.9914	0.9935	0.9957	0.9978	1.0000
Transect 2_20					
Area:	0.0009	0.0024	0.0043	0.0065	0.0089
	0.0116	0.0144	0.0174	0.0206	0.0240
	0.0275	0.0312	0.0351	0.0392	0.0434
	0.0478	0.0523	0.0570	0.0619	0.0669
	0.0722	0.0777	0.0834	0.0895	0.0960
	0.1033	0.1116	0.1233	0.1387	0.1573
	0.1813	0.2095	0.2411	0.2752	0.3098
	0.3451	0.3809	0.4177	0.4558	0.4954
	0.5369	0.5805	0.6273	0.6775	0.7290
Hrad:	0.7816	0.8350	0.8892	0.9442	1.0000
	0.0384	0.0778	0.1158	0.1538	0.1963
	0.2367	0.2763	0.3144	0.3507	0.3867
	0.4218	0.4574	0.4929	0.5277	0.5637
	0.5986	0.6310	0.6631	0.6941	0.7210
	0.7480	0.7730	0.7928	0.7903	0.7813
	0.7490	0.6648	0.5197	0.4589	0.4255
	0.3882	0.3913	0.4066	0.4486	0.4976
	0.5449	0.5899	0.6277	0.6594	0.6863
	0.7098	0.7228	0.7248	0.7462	0.7841
width:	0.8285	0.8714	0.9139	0.9565	1.0000
	0.0226	0.0304	0.0367	0.0420	0.0454
	0.0487	0.0519	0.0551	0.0584	0.0616
	0.0648	0.0679	0.0708	0.0737	0.0764
	0.0792	0.0822	0.0852	0.0884	0.0920
	0.0957	0.0996	0.1043	0.1123	0.1220
	0.1370	0.1671	0.2365	0.3015	0.3691
	0.4664	0.5349	0.5926	0.6130	0.6222
	0.6329	0.6454	0.6651	0.6908	0.7216
	0.7561	0.8030	0.8654	0.9079	0.9297
	0.9434	0.9582	0.9729	0.9872	1.0000
Transect 2_21					
Area:	0.0025	0.0053	0.0085	0.0119	0.0155
	0.0192	0.0231	0.0271	0.0313	0.0356
	0.0401	0.0447	0.0494	0.0543	0.0592
	0.0643	0.0695	0.0748	0.0802	0.0858
	0.0915	0.0980	0.1071	0.1188	0.1333
	0.1506	0.1707	0.1955	0.2258	0.2566
	0.2874	0.3183	0.3494	0.3809	0.4128
	0.4453	0.4783	0.5118	0.5458	0.5806
	0.6161	0.6523	0.6895	0.7278	0.7674

			Untitled		
	0.8085	0.8516	0.8972	0.9465	1.0000
Hrad:	0.0523	0.0989	0.1455	0.1917	0.2372
	0.2833	0.3281	0.3715	0.4139	0.4553
	0.4963	0.5364	0.5758	0.6172	0.6583
	0.6987	0.7386	0.7779	0.8145	0.8504
	0.8858	0.9117	0.9118	0.8944	0.8623
	0.8191	0.7813	0.6457	0.4144	0.4690
	0.5235	0.5779	0.6290	0.6757	0.7212
	0.7638	0.8108	0.8535	0.8924	0.9316
	0.9661	1.0018	1.0292	1.0531	1.0714
width:	1.0886	1.0838	1.0673	1.0400	1.0000
	0.0473	0.0538	0.0584	0.0620	0.0652
	0.0677	0.0702	0.0728	0.0753	0.0778
	0.0803	0.0828	0.0852	0.0873	0.0892
	0.0912	0.0932	0.0952	0.0974	0.0997
	0.1029	0.1358	0.1844	0.2328	0.2811
	0.3313	0.3837	0.5053	0.5442	0.5461
	0.5480	0.5500	0.5546	0.5627	0.5715
	0.5822	0.5891	0.5987	0.6108	0.6224
	0.6369	0.6504	0.6692	0.6904	0.7156
	0.7422	0.7853	0.8403	0.9100	1.0000
Transect 2_22					
Area:	0.0007	0.0018	0.0031	0.0048	0.0066
	0.0087	0.0110	0.0138	0.0210	0.0370
	0.0545	0.0721	0.0899	0.1079	0.1260
	0.1443	0.1630	0.1820	0.2013	0.2209
	0.2410	0.2615	0.2823	0.3036	0.3251
	0.3469	0.3692	0.3919	0.4149	0.4385
	0.4625	0.4870	0.5119	0.5373	0.5632
	0.5896	0.6164	0.6435	0.6710	0.6990
	0.7273	0.7561	0.7852	0.8148	0.8447
Hrad:	0.8750	0.9057	0.9368	0.9682	1.0000
	0.0235	0.0453	0.0667	0.0872	0.1075
	0.1260	0.1431	0.1607	0.1771	0.1936
	0.0988	0.1299	0.1607	0.1910	0.2208
	0.2486	0.2764	0.3027	0.3300	0.3539
	0.3787	0.4042	0.4286	0.4533	0.4787
	0.5011	0.5250	0.5465	0.5683	0.5881
	0.6086	0.6281	0.6487	0.6688	0.6901
	0.7071	0.7283	0.7517	0.7719	0.7918
	0.8121	0.8347	0.8529	0.8744	0.8940
width:	0.9152	0.9360	0.9569	0.9765	1.0000
	0.0289	0.0388	0.0469	0.0543	0.0612
	0.0685	0.0764	0.1359	0.3619	0.5471
	0.5514	0.5553	0.5594	0.5645	0.5704
	0.5805	0.5896	0.6011	0.6099	0.6241
	0.6365	0.6469	0.6587	0.6696	0.6789
	0.6923	0.7032	0.7170	0.7300	0.7456
	0.7598	0.7753	0.7892	0.8034	0.8161
	0.8338	0.8463	0.8561	0.8693	0.8827
	0.8956	0.9058	0.9206	0.9318	0.9449
	0.9561	0.9676	0.9790	0.9916	1.0000
Transect 2_23					
Area:	0.0003	0.0009	0.0017	0.0027	0.0038
	0.0050	0.0063	0.0078	0.0097	0.0123

			Untitled		
	0.0155	0.0201	0.0362	0.0542	0.0725
	0.0912	0.1103	0.1300	0.1501	0.1708
	0.1920	0.2137	0.2359	0.2586	0.2817
	0.3056	0.3298	0.3545	0.3798	0.4056
	0.4320	0.4588	0.4861	0.5139	0.5420
	0.5706	0.5995	0.6286	0.6581	0.6878
	0.7178	0.7480	0.7784	0.8092	0.8403
	0.8716	0.9033	0.9352	0.9675	1.0000
Hrad:					
	0.0185	0.0402	0.0643	0.0863	0.1069
	0.1261	0.1443	0.1542	0.1409	0.1393
	0.1422	0.1191	0.0661	0.0976	0.1281
	0.1585	0.1859	0.2136	0.2401	0.2671
	0.2922	0.3186	0.3436	0.3694	0.3926
	0.4165	0.4403	0.4640	0.4856	0.5094
	0.5304	0.5551	0.5769	0.6013	0.6251
	0.6489	0.6764	0.7022	0.7274	0.7536
	0.7805	0.8064	0.8315	0.8553	0.8808
	0.9066	0.9289	0.9525	0.9780	1.0000
width:					
	0.0158	0.0230	0.0270	0.0309	0.0348
	0.0390	0.0432	0.0500	0.0685	0.0875
	0.1081	0.3038	0.5472	0.5552	0.5661
	0.5754	0.5931	0.6083	0.6251	0.6394
	0.6571	0.6707	0.6866	0.7001	0.7175
	0.7335	0.7488	0.7641	0.7821	0.7963
	0.8144	0.8265	0.8426	0.8547	0.8671
	0.8794	0.8863	0.8952	0.9047	0.9127
	0.9197	0.9275	0.9362	0.9461	0.9540
	0.9614	0.9724	0.9819	0.9892	1.0000
Transect 2_24					
Area:					
	0.0003	0.0010	0.0019	0.0029	0.0041
	0.0055	0.0070	0.0086	0.0103	0.0122
	0.0143	0.0164	0.0187	0.0211	0.0238
	0.0266	0.0297	0.0333	0.0377	0.0456
	0.0663	0.0897	0.1133	0.1369	0.1607
	0.1847	0.2088	0.2330	0.2575	0.2823
	0.3073	0.3334	0.3612	0.3905	0.4217
	0.4546	0.4886	0.5237	0.5596	0.5966
	0.6346	0.6734	0.7126	0.7523	0.7925
	0.8331	0.8742	0.9157	0.9576	1.0000
Hrad:					
	0.0229	0.0535	0.0800	0.1089	0.1362
	0.1621	0.1869	0.2106	0.2336	0.2575
	0.2810	0.3041	0.3269	0.3441	0.3584
	0.3736	0.3726	0.3539	0.2986	0.2441
	0.1209	0.1626	0.2041	0.2453	0.2862
	0.3269	0.3670	0.4063	0.4450	0.4826
	0.5193	0.5533	0.5840	0.6121	0.5593
	0.5774	0.6018	0.6275	0.6535	0.6777
	0.7031	0.7351	0.7689	0.8010	0.8363
	0.8684	0.9009	0.9354	0.9674	1.0000
width:					
	0.0136	0.0184	0.0232	0.0266	0.0298
	0.0331	0.0363	0.0396	0.0430	0.0461
	0.0492	0.0523	0.0554	0.0594	0.0642
	0.0690	0.0774	0.0916	0.1240	0.3187
	0.5478	0.5508	0.5539	0.5571	0.5604
	0.5638	0.5678	0.5725	0.5776	0.5837
	0.5933	0.6339	0.6695	0.7071	0.7533
	0.7866	0.8114	0.8341	0.8560	0.8801

			Untitled		
	0.9023	0.9158	0.9266	0.9391	0.9475
	0.9593	0.9703	0.9789	0.9898	1.0000
Transect 2_25					
Area:					
	0.0001	0.0006	0.0013	0.0023	0.0033
	0.0045	0.0059	0.0073	0.0089	0.0106
	0.0124	0.0143	0.0164	0.0186	0.0210
	0.0235	0.0262	0.0290	0.0321	0.0355
	0.0443	0.0593	0.0796	0.1048	0.1302
	0.1556	0.1811	0.2068	0.2326	0.2587
	0.2851	0.3118	0.3388	0.3661	0.3955
	0.4272	0.4604	0.4949	0.5306	0.5679
	0.6067	0.6465	0.6880	0.7311	0.7748
	0.8190	0.8637	0.9088	0.9542	1.0000
Hrad:					
	0.0228	0.0455	0.0685	0.1003	0.1316
	0.1609	0.1888	0.2157	0.2417	0.2672
	0.2923	0.3170	0.3398	0.3596	0.3797
	0.4000	0.4179	0.4363	0.4388	0.4347
	0.3558	0.2702	0.1446	0.1898	0.2349
	0.2798	0.3241	0.3677	0.4111	0.4522
	0.4921	0.5318	0.5720	0.6099	0.6373
	0.6012	0.6228	0.6461	0.6687	0.6821
	0.7090	0.7365	0.7389	0.7739	0.8076
	0.8463	0.8841	0.9216	0.9604	1.0000
width:					
	0.0063	0.0126	0.0189	0.0222	0.0249
	0.0275	0.0302	0.0329	0.0356	0.0383
	0.0409	0.0435	0.0464	0.0497	0.0531
	0.0564	0.0602	0.0640	0.0705	0.0791
	0.2712	0.3796	0.5492	0.5510	0.5529
	0.5547	0.5575	0.5610	0.5646	0.5707
	0.5779	0.5849	0.5909	0.6117	0.6645
	0.7097	0.7384	0.7652	0.7928	0.8321
	0.8552	0.8775	0.9309	0.9445	0.9593
	0.9678	0.9769	0.9860	0.9936	1.0000
Transect 2_26					
Area:					
	0.0005	0.0016	0.0029	0.0044	0.0060
	0.0079	0.0099	0.0121	0.0144	0.0168
	0.0194	0.0221	0.0249	0.0278	0.0309
	0.0342	0.0375	0.0410	0.0446	0.0484
	0.0524	0.0565	0.0607	0.0652	0.0702
	0.0764	0.0865	0.1080	0.1395	0.1710
	0.2028	0.2346	0.2666	0.2988	0.3311
	0.3637	0.3965	0.4295	0.4635	0.5008
	0.5412	0.5848	0.6307	0.6788	0.7290
	0.7817	0.8355	0.8900	0.9448	1.0000
Hrad:					
	0.0304	0.0709	0.1124	0.1503	0.1858
	0.2209	0.2585	0.2946	0.3295	0.3635
	0.3965	0.4289	0.4621	0.4934	0.5243
	0.5548	0.5849	0.6147	0.6442	0.6702
	0.6942	0.7185	0.7393	0.7563	0.7689
	0.6000	0.3380	0.1902	0.2447	0.2990
	0.3530	0.4068	0.4598	0.5122	0.5643
	0.6157	0.6666	0.7153	0.7594	0.7996
	0.8334	0.7234	0.7442	0.7661	0.7865
	0.8111	0.8552	0.9038	0.9527	1.0000
width:					
	0.0160	0.0218	0.0252	0.0286	0.0320

			Untitled		
	0.0352	0.0376	0.0401	0.0425	0.0450
	0.0474	0.0499	0.0521	0.0545	0.0570
	0.0594	0.0618	0.0642	0.0667	0.0695
	0.0725	0.0755	0.0790	0.0830	0.1002
	0.1242	0.2532	0.5662	0.5685	0.5707
	0.5729	0.5752	0.5783	0.5818	0.5852
	0.5892	0.5933	0.5989	0.6458	0.7000
	0.7575	0.8076	0.8469	0.8855	0.9267
	0.9636	0.9769	0.9847	0.9916	1.0000
Transect 2_27					
Area:	0.0023	0.0055	0.0095	0.0141	0.0194
	0.0256	0.0323	0.0399	0.0482	0.0573
	0.0671	0.0778	0.0893	0.1015	0.1145
	0.1283	0.1428	0.1582	0.1744	0.1915
	0.2093	0.2279	0.2474	0.2677	0.2887
	0.3107	0.3334	0.3568	0.3811	0.4062
	0.4320	0.4586	0.4859	0.5137	0.5417
	0.5700	0.5987	0.6277	0.6570	0.6866
	0.7166	0.7469	0.7775	0.8085	0.8397
	0.8712	0.9030	0.9351	0.9674	1.0000
Hrad:					
	0.0272	0.0507	0.0724	0.0930	0.1099
	0.1304	0.1472	0.1647	0.1815	0.1989
	0.2134	0.2297	0.2454	0.2644	0.2795
	0.2963	0.3131	0.3274	0.3434	0.3579
	0.3766	0.3914	0.4078	0.4227	0.4400
	0.4537	0.4728	0.4885	0.5059	0.5207
	0.5403	0.5551	0.5760	0.6019	0.6292
	0.6541	0.6789	0.7051	0.7281	0.7527
	0.7792	0.8012	0.8252	0.8509	0.8758
	0.8998	0.9231	0.9496	0.9763	1.0000
width:					
	0.0861	0.1093	0.1309	0.1514	0.1768
	0.1961	0.2196	0.2423	0.2656	0.2880
	0.3144	0.3387	0.3639	0.3840	0.4096
	0.4330	0.4562	0.4831	0.5079	0.5350
	0.5559	0.5824	0.6066	0.6332	0.6562
	0.6847	0.7051	0.7305	0.7533	0.7801
	0.7995	0.8261	0.8435	0.8535	0.8609
	0.8715	0.8819	0.8902	0.9023	0.9122
	0.9197	0.9322	0.9423	0.9502	0.9588
	0.9683	0.9782	0.9847	0.9909	1.0000
Transect 2_28					
Area:	0.0002	0.0008	0.0018	0.0030	0.0045
	0.0062	0.0081	0.0101	0.0124	0.0148
	0.0175	0.0203	0.0233	0.0266	0.0300
	0.0336	0.0375	0.0417	0.0463	0.0516
	0.0579	0.0651	0.0734	0.0832	0.0949
	0.1082	0.1233	0.1402	0.1591	0.1798
	0.2024	0.2270	0.2534	0.2818	0.3121
	0.3444	0.3786	0.4148	0.4529	0.4930
	0.5350	0.5791	0.6251	0.6730	0.7229
	0.7748	0.8286	0.8844	0.9416	1.0000
Hrad:					
	0.0293	0.0585	0.0910	0.1291	0.1675
	0.2038	0.2385	0.2722	0.3050	0.3373
	0.3695	0.4012	0.4325	0.4636	0.4924
	0.5162	0.5348	0.5525	0.5478	0.5197
	0.5028	0.4916	0.4775	0.4527	0.4436

			Untitled		
	0.4472	0.4532	0.4568	0.4712	0.4877
	0.5026	0.5217	0.5447	0.5637	0.5852
	0.6083	0.6314	0.6555	0.6807	0.7052
	0.7306	0.7550	0.7825	0.8089	0.8342
	0.8609	0.8898	0.9180	0.9571	1.0000
width:					
	0.0068	0.0135	0.0194	0.0235	0.0268
	0.0301	0.0334	0.0367	0.0401	0.0434
	0.0466	0.0499	0.0531	0.0564	0.0599
	0.0641	0.0690	0.0744	0.0834	0.0982
	0.1140	0.1312	0.1525	0.1827	0.2129
	0.2410	0.2710	0.3060	0.3368	0.3679
	0.4020	0.4345	0.4646	0.4992	0.5327
	0.5656	0.5991	0.6323	0.6650	0.6988
	0.7321	0.7668	0.7987	0.8319	0.8665
	0.9000	0.9312	0.9634	0.9839	1.0000
Transect 2_29					
Area:	0.0006	0.0019	0.0037	0.0058	0.0083
	0.0110	0.0141	0.0176	0.0214	0.0255
	0.0300	0.0347	0.0398	0.0453	0.0513
	0.0577	0.0647	0.0725	0.0812	0.0912
	0.1024	0.1151	0.1292	0.1446	0.1614
	0.1796	0.1991	0.2201	0.2424	0.2662
	0.2916	0.3183	0.3465	0.3763	0.4074
	0.4399	0.4739	0.5093	0.5460	0.5841
	0.6235	0.6634	0.7038	0.7447	0.7863
	0.8283	0.8708	0.9134	0.9562	1.0000
Hrad:					
	0.0252	0.0535	0.0831	0.1124	0.1395
	0.1647	0.1887	0.2122	0.2371	0.2619
	0.2862	0.3101	0.3288	0.3463	0.3629
	0.3782	0.3846	0.3893	0.3822	0.3785
	0.3759	0.3772	0.3854	0.3965	0.4068
	0.4198	0.4330	0.4481	0.4650	0.4774
	0.4927	0.5117	0.5276	0.5449	0.5647
	0.5851	0.6028	0.6237	0.6443	0.6637
	0.6943	0.7292	0.7636	0.7963	0.8306
	0.8648	0.9044	0.9445	0.9764	1.0000
width:					
	0.0237	0.0357	0.0445	0.0516	0.0589
	0.0667	0.0745	0.0825	0.0897	0.0968
	0.1039	0.1110	0.1200	0.1298	0.1401
	0.1514	0.1671	0.1849	0.2113	0.2397
	0.2714	0.3042	0.3343	0.3639	0.3959
	0.4269	0.4591	0.4905	0.5207	0.5570
	0.5913	0.6217	0.6564	0.6902	0.7213
	0.7518	0.7860	0.8165	0.8474	0.8801
	0.8980	0.9097	0.9216	0.9353	0.9466
	0.9579	0.9628	0.9669	0.9792	1.0000
Transect 2_3					
Area:	0.0001	0.0005	0.0011	0.0018	0.0027
	0.0038	0.0050	0.0064	0.0080	0.0098
	0.0120	0.0144	0.0169	0.0198	0.0229
	0.0262	0.0297	0.0334	0.0372	0.0413
	0.0457	0.0511	0.0602	0.0729	0.0893
	0.1104	0.1360	0.1683	0.2044	0.2408
	0.2774	0.3141	0.3508	0.3877	0.4246
	0.4617	0.4989	0.5362	0.5736	0.6111
	0.6487	0.6864	0.7243	0.7624	0.8008

			Untitled		
Hrad:	0.8395	0.8786	0.9181	0.9584	1.0000
	0.0223	0.0456	0.0730	0.0984	0.1219
	0.1461	0.1698	0.1892	0.2098	0.2225
	0.2320	0.2573	0.2822	0.2946	0.3196
	0.3456	0.3711	0.3929	0.4184	0.4340
	0.4440	0.4526	0.4327	0.4124	0.3634
	0.3237	0.2722	0.2373	0.2523	0.2951
	0.3390	0.3829	0.4266	0.4703	0.5138
	0.5567	0.5998	0.6428	0.6857	0.7280
	0.7706	0.8132	0.8555	0.8971	0.9388
width:	0.9801	1.0210	1.0604	1.0979	1.0000
	0.0056	0.0109	0.0145	0.0182	0.0221
	0.0257	0.0293	0.0337	0.0381	0.0440
	0.0514	0.0556	0.0598	0.0669	0.0714
	0.0756	0.0797	0.0846	0.0887	0.0949
	0.1026	0.1476	0.2515	0.3210	0.4280
	0.5186	0.6470	0.7965	0.8103	0.8163
	0.8184	0.8204	0.8224	0.8245	0.8265
	0.8295	0.8319	0.8342	0.8365	0.8395
	0.8418	0.8442	0.8488	0.8548	0.8604
	0.8683	0.8782	0.8886	0.9121	1.0000

Transect 2_30

Area:	0.0007	0.0018	0.0034	0.0052	0.0074
	0.0099	0.0128	0.0162	0.0200	0.0242
	0.0289	0.0340	0.0397	0.0459	0.0527
	0.0600	0.0679	0.0764	0.0857	0.0959
	0.1072	0.1194	0.1326	0.1468	0.1622
	0.1789	0.1968	0.2161	0.2367	0.2588
	0.2822	0.3070	0.3333	0.3610	0.3901
	0.4204	0.4521	0.4854	0.5200	0.5561
	0.5937	0.6328	0.6735	0.7158	0.7598
	0.8053	0.8523	0.9006	0.9499	1.0000

Hrad:	0.0366	0.0684	0.1003	0.1294	0.1560
	0.1813	0.2068	0.2264	0.2469	0.2718
	0.2948	0.3148	0.3341	0.3526	0.3733
	0.3946	0.4154	0.4314	0.4417	0.4488
	0.4579	0.4710	0.4856	0.4996	0.5080
	0.5184	0.5327	0.5443	0.5577	0.5726
	0.5892	0.6022	0.6211	0.6389	0.6617
	0.6826	0.7014	0.7194	0.7409	0.7602
	0.7797	0.7995	0.8183	0.8349	0.8553
	0.8775	0.8990	0.9283	0.9623	1.0000

width:	0.0187	0.0268	0.0332	0.0398	0.0469
	0.0542	0.0615	0.0707	0.0802	0.0883
	0.0971	0.1072	0.1179	0.1292	0.1402
	0.1511	0.1624	0.1761	0.1929	0.2126
	0.2329	0.2524	0.2720	0.2928	0.3182
	0.3440	0.3686	0.3961	0.4236	0.4511
	0.4781	0.5090	0.5359	0.5645	0.5889
	0.6153	0.6441	0.6743	0.7014	0.7311
	0.7610	0.7912	0.8228	0.8571	0.8882
	0.9176	0.9480	0.9702	0.9871	1.0000

Transect 2_31

Area:	0.0004	0.0014	0.0028	0.0046	0.0067
	0.0091	0.0119	0.0149	0.0183	0.0220

			Untitled		
	0.0260	0.0303	0.0349	0.0398	0.0450
	0.0505	0.0563	0.0625	0.0692	0.0766
	0.0848	0.0943	0.1049	0.1169	0.1305
	0.1458	0.1627	0.1815	0.2021	0.2245
	0.2489	0.2752	0.3035	0.3335	0.3653
	0.3987	0.4335	0.4698	0.5076	0.5469
	0.5876	0.6296	0.6730	0.7177	0.7634
	0.8097	0.8566	0.9041	0.9520	1.0000
Hrad:	0.0242	0.0562	0.0864	0.1146	0.1421
	0.1682	0.1952	0.2222	0.2476	0.2727
	0.2986	0.3242	0.3497	0.3760	0.4019
	0.4274	0.4474	0.4677	0.4677	0.4669
	0.4634	0.4485	0.4467	0.4388	0.4355
	0.4347	0.4380	0.4433	0.4528	0.4630
	0.4729	0.4869	0.5013	0.5212	0.5402
	0.5645	0.5881	0.6130	0.6363	0.6601
	0.6858	0.7123	0.7387	0.7647	0.8010
	0.8388	0.8742	0.9132	0.9567	1.0000
width:	0.0164	0.0256	0.0329	0.0401	0.0469
	0.0539	0.0605	0.0668	0.0734	0.0800
	0.0863	0.0926	0.0989	0.1048	0.1108
	0.1168	0.1244	0.1321	0.1465	0.1627
	0.1818	0.2091	0.2339	0.2657	0.2992
	0.3350	0.3715	0.4097	0.4468	0.4857
	0.5274	0.5666	0.6070	0.6417	0.6783
	0.7086	0.7397	0.7691	0.8007	0.8315
	0.8600	0.8875	0.9148	0.9423	0.9563
	0.9679	0.9819	0.9915	0.9958	1.0000

Transect 2_32

Area:	0.0005	0.0019	0.0037	0.0059	0.0083
	0.0111	0.0141	0.0174	0.0209	0.0247
	0.0289	0.0335	0.0386	0.0440	0.0500
	0.0563	0.0633	0.0710	0.0797	0.0895
	0.1008	0.1134	0.1273	0.1427	0.1597
	0.1780	0.1980	0.2195	0.2426	0.2672
	0.2933	0.3208	0.3496	0.3798	0.4115
	0.4447	0.4793	0.5151	0.5518	0.5897
	0.6285	0.6679	0.7078	0.7481	0.7889
	0.8301	0.8718	0.9139	0.9566	1.0000

Hrad:	0.0212	0.0519	0.0805	0.1113	0.1400
	0.1672	0.1939	0.2202	0.2450	0.2694
	0.2856	0.2998	0.3168	0.3341	0.3519
	0.3692	0.3757	0.3779	0.3745	0.3694
	0.3669	0.3736	0.3792	0.3844	0.3965
	0.4077	0.4155	0.4300	0.4450	0.4605
	0.4792	0.4991	0.5171	0.5392	0.5547
	0.5745	0.5957	0.6227	0.6468	0.6735
	0.7040	0.7361	0.7730	0.8082	0.8419
	0.8776	0.9125	0.9451	0.9731	1.0000

width:	0.0247	0.0364	0.0457	0.0522	0.0586
	0.0650	0.0712	0.0771	0.0834	0.0897
	0.0989	0.1092	0.1190	0.1289	0.1389
	0.1494	0.1649	0.1841	0.2089	0.2384
	0.2705	0.2989	0.3310	0.3663	0.3974
	0.4310	0.4707	0.5044	0.5387	0.5737
	0.6053	0.6356	0.6688	0.6970	0.7342
	0.7661	0.7964	0.8186	0.8445	0.8666

			Untitled		
	0.8836	0.8981	0.9063	0.9163	0.9275
	0.9364	0.9457	0.9572	0.9731	1.0000
Transect 2_33					
Area:					
	0.0007	0.0019	0.0034	0.0053	0.0074
	0.0098	0.0125	0.0154	0.0184	0.0217
	0.0252	0.0291	0.0332	0.0378	0.0428
	0.0487	0.0551	0.0622	0.0708	0.0806
	0.0914	0.1030	0.1155	0.1290	0.1433
	0.1586	0.1750	0.1926	0.2110	0.2308
	0.2520	0.2755	0.3032	0.3347	0.3688
	0.4036	0.4393	0.4761	0.5135	0.5516
	0.5904	0.6301	0.6705	0.7120	0.7545
	0.7991	0.8468	0.8965	0.9475	1.0000
Hrad:					
	0.0346	0.0636	0.0948	0.1253	0.1540
	0.1830	0.2141	0.2441	0.2728	0.3007
	0.3218	0.3409	0.3590	0.3747	0.3661
	0.3678	0.3884	0.3829	0.3606	0.3651
	0.3866	0.4058	0.4249	0.4404	0.4622
	0.4746	0.4860	0.5085	0.5258	0.5363
	0.5470	0.5529	0.5532	0.4777	0.5096
	0.5474	0.5766	0.6128	0.6488	0.6844
	0.7200	0.7506	0.7792	0.8107	0.8371
	0.8773	0.9139	0.9478	0.9765	1.0000
width:					
	0.0176	0.0258	0.0319	0.0371	0.0424
	0.0472	0.0511	0.0550	0.0589	0.0629
	0.0683	0.0743	0.0806	0.0878	0.1020
	0.1157	0.1241	0.1423	0.1725	0.1941
	0.2080	0.2234	0.2393	0.2580	0.2732
	0.2946	0.3176	0.3342	0.3543	0.3802
	0.4071	0.4818	0.5442	0.6206	0.6411
	0.6533	0.6751	0.6884	0.7013	0.7142
	0.7267	0.7439	0.7626	0.7784	0.7989
	0.8653	0.9087	0.9349	0.9590	1.0000
Transect 2_34					
Area:					
	0.0009	0.0025	0.0048	0.0077	0.0112
	0.0152	0.0200	0.0258	0.0325	0.0405
	0.0497	0.0600	0.0714	0.0842	0.0987
	0.1145	0.1313	0.1490	0.1674	0.1867
	0.2066	0.2274	0.2490	0.2714	0.2947
	0.3184	0.3426	0.3671	0.3919	0.4169
	0.4422	0.4677	0.4935	0.5195	0.5458
	0.5723	0.5991	0.6263	0.6539	0.6820
	0.7106	0.7397	0.7693	0.7994	0.8303
	0.8625	0.8959	0.9301	0.9649	1.0000
Hrad:					
	0.0233	0.0456	0.0651	0.0860	0.1065
	0.1231	0.1333	0.1455	0.1554	0.1651
	0.1819	0.1955	0.2094	0.2176	0.2281
	0.2484	0.2692	0.2913	0.3136	0.3366
	0.3582	0.3782	0.4001	0.4191	0.4424
	0.4691	0.4963	0.5253	0.5551	0.5849
	0.6143	0.6437	0.6730	0.7015	0.7293
	0.7571	0.7837	0.8078	0.8281	0.8477
	0.8693	0.8916	0.9109	0.9253	0.9309
	0.9267	0.9370	0.9502	0.9738	1.0000
width:					
	0.0380	0.0558	0.0741	0.0900	0.1049

			Untitled		
	0.1232	0.1498	0.1770	0.2094	0.2455
	0.2732	0.3066	0.3408	0.3869	0.4328
	0.4612	0.4879	0.5116	0.5340	0.5546
	0.5769	0.6014	0.6225	0.6477	0.6661
	0.6786	0.6901	0.6988	0.7058	0.7126
	0.7197	0.7264	0.7330	0.7403	0.7480
	0.7556	0.7641	0.7750	0.7893	0.8043
	0.8173	0.8294	0.8443	0.8637	0.8918
	0.9307	0.9562	0.9788	0.9908	1.0000
Transect 2_35					
Area:					
	0.0003	0.0010	0.0019	0.0029	0.0047
	0.0074	0.0107	0.0145	0.0188	0.0237
	0.0292	0.0366	0.0490	0.0665	0.0867
	0.1076	0.1289	0.1507	0.1730	0.1957
	0.2187	0.2420	0.2655	0.2892	0.3130
	0.3370	0.3610	0.3851	0.4093	0.4336
	0.4581	0.4827	0.5074	0.5323	0.5573
	0.5827	0.6083	0.6343	0.6605	0.6874
	0.7149	0.7431	0.7720	0.8017	0.8322
	0.8636	0.8958	0.9292	0.9635	1.0000
Hrad:					
	0.0247	0.0499	0.0744	0.0920	0.0744
	0.0967	0.1148	0.1354	0.1578	0.1757
	0.1931	0.2015	0.1893	0.1280	0.1616
	0.1954	0.2290	0.2624	0.2953	0.3274
	0.3619	0.3962	0.4303	0.4667	0.5030
	0.5391	0.5750	0.6105	0.6460	0.6814
	0.7158	0.7500	0.7843	0.8179	0.8486
	0.8758	0.9029	0.9313	0.9562	0.9682
	0.9823	1.0006	1.0121	1.0195	1.0288
	1.0461	1.0483	1.0524	1.0567	1.0000
width:					
	0.0137	0.0199	0.0248	0.0316	0.0636
	0.0767	0.0928	0.1069	0.1192	0.1346
	0.1510	0.2616	0.3853	0.5193	0.5369
	0.5506	0.5631	0.5745	0.5858	0.5976
	0.6044	0.6107	0.6170	0.6197	0.6223
	0.6249	0.6277	0.6306	0.6335	0.6362
	0.6398	0.6434	0.6468	0.6506	0.6565
	0.6651	0.6735	0.6808	0.6905	0.7097
	0.7276	0.7425	0.7626	0.7862	0.8088
	0.8253	0.8544	0.8828	0.9117	1.0000
Transect 2_36					
Area:					
	0.0005	0.0035	0.0087	0.0142	0.0203
	0.0274	0.0353	0.0438	0.0532	0.0636
	0.0745	0.0864	0.1007	0.1166	0.1335
	0.1508	0.1683	0.1859	0.2036	0.2217
	0.2401	0.2588	0.2778	0.2972	0.3168
	0.3366	0.3565	0.3769	0.3980	0.4200
	0.4426	0.4657	0.4895	0.5149	0.5414
	0.5686	0.5965	0.6248	0.6536	0.6829
	0.7131	0.7436	0.7743	0.8053	0.8367
	0.8685	0.9008	0.9335	0.9666	1.0000
Hrad:					
	0.0151	0.0244	0.0545	0.0827	0.1065
	0.1218	0.1442	0.1672	0.1856	0.2135
	0.2408	0.2514	0.2396	0.2648	0.2602
	0.2916	0.3229	0.3536	0.3842	0.4077
	0.4371	0.4612	0.4865	0.5107	0.5412

			Untitled		
	0.5715	0.5984	0.6089	0.6186	0.6316
	0.6526	0.6703	0.6700	0.6646	0.6745
	0.6938	0.7148	0.7362	0.7576	0.7802
	0.7890	0.8174	0.8454	0.8692	0.8907
	0.9102	0.9325	0.9558	0.9775	1.0000
width:	0.0299	0.1483	0.1594	0.1722	0.1904
	0.2249	0.2446	0.2661	0.2949	0.3187
	0.3318	0.3837	0.4629	0.4822	0.5130
	0.5171	0.5211	0.5256	0.5300	0.5439
	0.5493	0.5611	0.5710	0.5819	0.5854
	0.5889	0.5957	0.6189	0.6434	0.6650
	0.6782	0.6947	0.7306	0.7747	0.8026
	0.8196	0.8345	0.8487	0.8626	0.8903
	0.9039	0.9097	0.9159	0.9264	0.9394
	0.9543	0.9660	0.9766	0.9888	1.0000
Transect 2_37					
Area:	0.0009	0.0029	0.0067	0.0125	0.0203
	0.0301	0.0418	0.0551	0.0694	0.0845
	0.1007	0.1187	0.1387	0.1611	0.1839
	0.2069	0.2298	0.2527	0.2757	0.2987
	0.3218	0.3448	0.3679	0.3910	0.4141
	0.4372	0.4604	0.4836	0.5068	0.5301
	0.5533	0.5766	0.5999	0.6233	0.6466
	0.6700	0.6934	0.7169	0.7403	0.7638
	0.7873	0.8109	0.8344	0.8580	0.8816
	0.9052	0.9289	0.9526	0.9763	1.0000
Hrad:	0.0134	0.0282	0.0329	0.0432	0.0546
	0.0671	0.0770	0.0952	0.1135	0.1314
	0.1434	0.1537	0.1674	0.1671	0.1907
	0.2142	0.2378	0.2613	0.2847	0.3082
	0.3316	0.3550	0.3784	0.4017	0.4250
	0.4483	0.4715	0.4948	0.5180	0.5412
	0.5643	0.5875	0.6106	0.6337	0.6567
	0.6798	0.7028	0.7258	0.7488	0.7717
	0.7947	0.8176	0.8405	0.8633	0.8861
	0.9090	0.9318	0.9545	0.9773	1.0000
width:	0.0657	0.1014	0.2036	0.2889	0.3714
	0.4486	0.5429	0.5788	0.6186	0.6559
	0.7190	0.7992	0.8843	0.9637	0.9646
	0.9656	0.9665	0.9675	0.9684	0.9694
	0.9703	0.9713	0.9723	0.9733	0.9744
	0.9754	0.9764	0.9774	0.9785	0.9795
	0.9805	0.9815	0.9826	0.9836	0.9846
	0.9856	0.9867	0.9877	0.9887	0.9897
	0.9908	0.9918	0.9928	0.9938	0.9949
	0.9959	0.9969	0.9979	0.9990	1.0000
Transect 2_38					
Area:	0.0037	0.0080	0.0131	0.0189	0.0254
	0.0327	0.0407	0.0494	0.0588	0.0686
	0.0784	0.0883	0.0981	0.1092	0.1223
	0.1354	0.1486	0.1618	0.1775	0.1939
	0.2104	0.2268	0.2433	0.2604	0.2781
	0.2965	0.3156	0.3355	0.3561	0.3774
	0.3994	0.4221	0.4457	0.4699	0.4948
	0.5204	0.5468	0.5739	0.6017	0.6302
	0.6597	0.6931	0.7271	0.7618	0.7971

			Untitled		
	0.8351	0.8754	0.9163	0.9578	1.0000
Hrad:	0.2948	0.5495	0.7797	0.9941	1.1881
	1.3867	1.5791	1.7667	1.9505	2.2566
	2.5744	2.8915	3.2078	2.6983	3.0151
	3.3313	3.6467	3.9613	3.5061	3.8211
	4.1354	4.4491	4.7122	4.8439	4.9778
	5.1138	5.2516	5.3422	5.4882	5.6351
	5.7829	5.8737	6.0283	6.1833	6.3387
	6.4943	6.5875	6.7486	6.9097	7.0708
	6.4481	6.6449	6.8404	7.0346	7.2276
	6.7563	6.9721	7.1862	7.3988	1.0000
width:	0.0124	0.0146	0.0168	0.0190	0.0214
	0.0236	0.0258	0.0279	0.0301	0.0304
	0.0304	0.0305	0.0306	0.0404	0.0405
	0.0406	0.0407	0.0408	0.0506	0.0507
	0.0508	0.0509	0.0516	0.0537	0.0558
	0.0579	0.0600	0.0627	0.0648	0.0669
	0.0690	0.0718	0.0739	0.0759	0.0780
	0.0801	0.0829	0.0850	0.0870	0.0890
	0.1022	0.1042	0.1062	0.1082	0.1102
	0.1235	0.1255	0.1274	0.1294	1.0000
Transect 2_39					
Area:	0.0001	0.0005	0.0011	0.0028	0.0050
	0.0080	0.0118	0.0161	0.0212	0.0269
	0.0335	0.0407	0.0490	0.0579	0.0676
	0.0782	0.0895	0.1016	0.1147	0.1287
	0.1432	0.1589	0.1753	0.1926	0.2106
	0.2296	0.2490	0.2694	0.2911	0.3136
	0.3369	0.3613	0.3868	0.4135	0.4412
	0.4695	0.4991	0.5297	0.5613	0.5941
	0.6278	0.6632	0.7000	0.7381	0.7774
	0.8182	0.8603	0.9045	0.9511	1.0000
Hrad:	0.0255	0.0509	0.0582	0.0770	0.1001
	0.1150	0.1525	0.1685	0.2009	0.2254
	0.2527	0.2666	0.2943	0.3101	0.3390
	0.3707	0.3897	0.4068	0.4391	0.4581
	0.4940	0.4992	0.5310	0.5579	0.5707
	0.6110	0.6376	0.6559	0.6668	0.6953
	0.7222	0.7348	0.7557	0.7773	0.7992
	0.8355	0.8427	0.8635	0.8801	0.9171
	0.9260	0.9365	0.9569	0.9688	0.9857
	0.9992	1.0133	1.0172	1.0123	1.0000
width:	0.0050	0.0100	0.0196	0.0369	0.0495
	0.0696	0.0772	0.0957	0.1058	0.1194
	0.1324	0.1527	0.1664	0.1866	0.1996
	0.2108	0.2297	0.2498	0.2612	0.2810
	0.2899	0.3183	0.3302	0.3453	0.3690
	0.3758	0.3906	0.4108	0.4365	0.4510
	0.4665	0.4917	0.5119	0.5319	0.5520
	0.5620	0.5922	0.6135	0.6378	0.6478
	0.6780	0.7082	0.7315	0.7619	0.7887
	0.8189	0.8490	0.8909	0.9396	1.0000
Transect 2_4					
Area:	0.0023	0.0082	0.0161	0.0255	0.0359
	0.0474	0.0608	0.0760	0.0919	0.1081

			Untitled		
	0.1247	0.1414	0.1584	0.1758	0.1934
	0.2113	0.2295	0.2479	0.2666	0.2854
	0.3045	0.3237	0.3431	0.3627	0.3826
	0.4027	0.4230	0.4434	0.4642	0.4854
	0.5076	0.5305	0.5539	0.5779	0.6026
	0.6278	0.6532	0.6787	0.7044	0.7302
	0.7562	0.7823	0.8087	0.8353	0.8621
	0.8892	0.9166	0.9443	0.9721	1.0000
Hrad:					
	0.0159	0.0332	0.0524	0.0727	0.0918
	0.1089	0.1174	0.1356	0.1610	0.1857
	0.2112	0.2359	0.2588	0.2829	0.3059
	0.3292	0.3517	0.3756	0.3994	0.4228
	0.4463	0.4703	0.4934	0.5145	0.5373
	0.5585	0.5816	0.6040	0.6244	0.6324
	0.6440	0.6559	0.6686	0.6865	0.6960
	0.6930	0.7179	0.7426	0.7664	0.7877
	0.8114	0.8351	0.8523	0.8746	0.8943
	0.9126	0.9258	0.9506	0.9753	1.0000
width:					
	0.1456	0.2484	0.3109	0.3540	0.3939
	0.4389	0.5221	0.5649	0.5756	0.5870
	0.5948	0.6037	0.6165	0.6255	0.6362
	0.6457	0.6563	0.6637	0.6710	0.6785
	0.6855	0.6914	0.6982	0.7078	0.7148
	0.7236	0.7297	0.7364	0.7488	0.7804
	0.8057	0.8291	0.8515	0.8670	0.8929
	0.9079	0.9118	0.9156	0.9207	0.9284
	0.9332	0.9379	0.9498	0.9558	0.9647
	0.9749	0.9906	0.9937	0.9969	1.0000
Transect 2_40					
Area:					
	0.0003	0.0011	0.0029	0.0053	0.0087
	0.0129	0.0179	0.0237	0.0303	0.0378
	0.0460	0.0550	0.0649	0.0756	0.0871
	0.0994	0.1125	0.1263	0.1410	0.1565
	0.1728	0.1899	0.2078	0.2265	0.2462
	0.2665	0.2877	0.3098	0.3327	0.3563
	0.3807	0.4060	0.4321	0.4590	0.4867
	0.5153	0.5446	0.5748	0.6057	0.6375
	0.6700	0.7034	0.7377	0.7727	0.8086
	0.8453	0.8828	0.9211	0.9601	1.0000
Hrad:					
	0.0191	0.0376	0.0558	0.0723	0.0916
	0.1127	0.1348	0.1547	0.1719	0.1948
	0.2140	0.2373	0.2520	0.2748	0.2959
	0.3151	0.3371	0.3570	0.3770	0.3970
	0.4169	0.4381	0.4570	0.4757	0.4953
	0.5171	0.5352	0.5548	0.5772	0.5971
	0.6171	0.6368	0.6585	0.6773	0.6960
	0.7160	0.7385	0.7585	0.7785	0.7985
	0.8185	0.8382	0.8579	0.8789	0.8979
	0.9154	0.9407	0.9609	0.9798	1.0000
width:					
	0.0134	0.0302	0.0514	0.0734	0.0949
	0.1149	0.1330	0.1531	0.1762	0.1939
	0.2150	0.2318	0.2576	0.2752	0.2945
	0.3154	0.3338	0.3539	0.3741	0.3942
	0.4144	0.4335	0.4547	0.4762	0.4970
	0.5154	0.5376	0.5585	0.5763	0.5967
	0.6170	0.6376	0.6562	0.6777	0.6993
	0.7198	0.7375	0.7577	0.7780	0.7983

			Untitled		
	0.8185	0.8392	0.8599	0.8792	0.9005
	0.9234	0.9385	0.9586	0.9799	1.0000
Transect 2_5					
Area:					
	0.0015	0.0047	0.0085	0.0131	0.0188
	0.0254	0.0330	0.0416	0.0511	0.0623
	0.0746	0.0876	0.1018	0.1171	0.1330
	0.1494	0.1664	0.1839	0.2021	0.2208
	0.2399	0.2594	0.2793	0.2996	0.3205
	0.3421	0.3640	0.3864	0.4092	0.4323
	0.4558	0.4797	0.5040	0.5287	0.5538
	0.5793	0.6054	0.6322	0.6597	0.6881
	0.7175	0.7474	0.7777	0.8083	0.8392
	0.8704	0.9020	0.9342	0.9669	1.0000
Hrad:					
	0.0192	0.0440	0.0672	0.0856	0.1029
	0.1187	0.1373	0.1548	0.1704	0.1748
	0.1965	0.2168	0.2296	0.2508	0.2749
	0.2984	0.3224	0.3434	0.3661	0.3901
	0.4149	0.4393	0.4639	0.4875	0.5015
	0.5252	0.5479	0.5710	0.5952	0.6193
	0.6428	0.6647	0.6856	0.7093	0.7321
	0.7500	0.7647	0.7749	0.7905	0.7908
	0.8048	0.8289	0.8519	0.8758	0.9005
	0.9214	0.9423	0.9566	0.9754	1.0000
width:					
	0.0800	0.1067	0.1274	0.1545	0.1837
	0.2154	0.2421	0.2701	0.3096	0.3583
	0.3817	0.4067	0.4460	0.4697	0.4865
	0.5037	0.5191	0.5387	0.5552	0.5691
	0.5815	0.5938	0.6054	0.6179	0.6425
	0.6547	0.6679	0.6803	0.6910	0.7016
	0.7127	0.7252	0.7388	0.7490	0.7601
	0.7761	0.7954	0.8197	0.8385	0.8744
	0.8959	0.9055	0.9162	0.9257	0.9342
	0.9465	0.9586	0.9775	0.9919	1.0000
Transect 2_6					
Area:					
	0.0011	0.0054	0.0123	0.0200	0.0286
	0.0380	0.0481	0.0589	0.0704	0.0826
	0.0953	0.1087	0.1225	0.1367	0.1514
	0.1665	0.1820	0.1979	0.2142	0.2309
	0.2480	0.2656	0.2836	0.3020	0.3208
	0.3400	0.3597	0.3798	0.4004	0.4215
	0.4432	0.4655	0.4883	0.5119	0.5363
	0.5616	0.5880	0.6158	0.6451	0.6758
	0.7070	0.7384	0.7699	0.8017	0.8337
	0.8660	0.8988	0.9319	0.9654	1.0000
Hrad:					
	0.0189	0.0294	0.0593	0.0871	0.1119
	0.1372	0.1619	0.1857	0.2091	0.2329
	0.2575	0.2821	0.3065	0.3322	0.3580
	0.3836	0.4082	0.4325	0.4566	0.4794
	0.5027	0.5255	0.5479	0.5702	0.5930
	0.6150	0.6360	0.6556	0.6749	0.6918
	0.7075	0.7251	0.7400	0.7483	0.7594
	0.7649	0.7618	0.7595	0.7520	0.7641
	0.7954	0.8250	0.8542	0.8830	0.9118
	0.9350	0.9600	0.9827	1.0027	1.0000
width:					
	0.0604	0.1839	0.2083	0.2306	0.2561

			Untitled		
	0.2774	0.2975	0.3178	0.3374	0.3554
	0.3710	0.3858	0.4002	0.4122	0.4235
	0.4346	0.4462	0.4578	0.4693	0.4819
	0.4936	0.5055	0.5176	0.5296	0.5409
	0.5527	0.5653	0.5790	0.5930	0.6089
	0.6261	0.6416	0.6595	0.6837	0.7059
	0.7339	0.7716	0.8106	0.8578	0.8844
	0.8888	0.8949	0.9012	0.9078	0.9143
	0.9261	0.9360	0.9481	0.9627	1.0000
Transect 2_7					
Area:	0.0004	0.0014	0.0030	0.0055	0.0087
	0.0131	0.0184	0.0249	0.0327	0.0429
	0.0542	0.0663	0.0792	0.0932	0.1081
	0.1235	0.1394	0.1561	0.1735	0.1917
	0.2106	0.2305	0.2513	0.2734	0.2967
	0.3207	0.3454	0.3707	0.3965	0.4227
	0.4493	0.4760	0.5028	0.5298	0.5571
	0.5845	0.6120	0.6398	0.6678	0.6960
	0.7244	0.7531	0.7821	0.8114	0.8416
	0.8725	0.9038	0.9356	0.9676	1.0000
Hrad:					
	0.0205	0.0367	0.0448	0.0624	0.0741
	0.0890	0.0987	0.1128	0.1263	0.1272
	0.1506	0.1725	0.1925	0.2090	0.2320
	0.2568	0.2791	0.2962	0.3197	0.3349
	0.3544	0.3678	0.3849	0.3888	0.4081
	0.4288	0.4490	0.4709	0.4961	0.5214
	0.5490	0.5784	0.6075	0.6349	0.6632
	0.6923	0.7205	0.7453	0.7731	0.7999
	0.8245	0.8477	0.8735	0.8924	0.8978
	0.9093	0.9314	0.9545	0.9763	1.0000
width:					
	0.0215	0.0373	0.0663	0.0874	0.1178
	0.1469	0.1862	0.2206	0.2669	0.3372
	0.3600	0.3846	0.4116	0.4462	0.4661
	0.4810	0.4997	0.5272	0.5429	0.5725
	0.5945	0.6269	0.6531	0.7035	0.7273
	0.7482	0.7695	0.7876	0.7995	0.8110
	0.8185	0.8230	0.8277	0.8345	0.8400
	0.8442	0.8493	0.8584	0.8637	0.8700
	0.8786	0.8884	0.8954	0.9092	0.9374
	0.9595	0.9704	0.9802	0.9912	1.0000
Transect 2_8					
Area:	0.0009	0.0023	0.0041	0.0065	0.0093
	0.0125	0.0160	0.0200	0.0248	0.0308
	0.0379	0.0460	0.0559	0.0677	0.0809
	0.0946	0.1091	0.1246	0.1411	0.1584
	0.1764	0.1950	0.2142	0.2339	0.2543
	0.2757	0.2983	0.3218	0.3462	0.3714
	0.3976	0.4246	0.4524	0.4809	0.5099
	0.5391	0.5686	0.5985	0.6286	0.6590
	0.6897	0.7208	0.7528	0.7857	0.8198
	0.8547	0.8903	0.9266	0.9630	1.0000
Hrad:					
	0.0294	0.0556	0.0698	0.0944	0.1170
	0.1370	0.1580	0.1751	0.1843	0.1725
	0.1899	0.1974	0.1814	0.2048	0.2235
	0.2510	0.2735	0.2878	0.3119	0.3350
	0.3595	0.3862	0.4115	0.4361	0.4555

			Untitled		
	0.4702	0.4808	0.5020	0.5205	0.5385
	0.5589	0.5790	0.5975	0.6253	0.6537
	0.6849	0.7151	0.7454	0.7749	0.8045
	0.8355	0.8510	0.8656	0.8858	0.8874
	0.9050	0.9230	0.9514	0.9822	1.0000
width:					
	0.0313	0.0407	0.0591	0.0689	0.0792
	0.0908	0.1014	0.1144	0.1387	0.1787
	0.1994	0.2329	0.3082	0.3307	0.3617
	0.3770	0.3989	0.4330	0.4525	0.4729
	0.4907	0.5049	0.5204	0.5362	0.5581
	0.5862	0.6203	0.6410	0.6651	0.6898
	0.7114	0.7333	0.7572	0.7691	0.7799
	0.7870	0.7951	0.8028	0.8111	0.8191
	0.8254	0.8470	0.8696	0.9008	0.9238
	0.9444	0.9646	0.9739	0.9804	1.0000
Transect 2_9					
Area:	0.0008	0.0022	0.0040	0.0065	0.0096
	0.0138	0.0186	0.0244	0.0313	0.0393
	0.0485	0.0587	0.0701	0.0823	0.0955
	0.1096	0.1243	0.1396	0.1555	0.1720
	0.1891	0.2071	0.2274	0.2502	0.2742
	0.2991	0.3250	0.3517	0.3790	0.4065
	0.4342	0.4620	0.4900	0.5181	0.5464
	0.5749	0.6035	0.6323	0.6612	0.6903
	0.7196	0.7492	0.7790	0.8092	0.8396
	0.8704	0.9019	0.9340	0.9667	1.0000
Hrad:					
	0.0224	0.0467	0.0640	0.0777	0.0932
	0.1042	0.1194	0.1304	0.1435	0.1555
	0.1682	0.1838	0.2013	0.2192	0.2371
	0.2576	0.2805	0.3032	0.3252	0.3464
	0.3661	0.3717	0.3545	0.3605	0.3794
	0.3983	0.4185	0.4410	0.4675	0.4985
	0.5293	0.5599	0.5902	0.6200	0.6492
	0.6791	0.7093	0.7390	0.7677	0.7962
	0.8240	0.8488	0.8731	0.8984	0.9234
	0.9396	0.9537	0.9700	0.9799	1.0000
width:					
	0.0358	0.0472	0.0634	0.0841	0.1091
	0.1337	0.1576	0.1890	0.2199	0.2549
	0.2908	0.3226	0.3513	0.3790	0.4067
	0.4295	0.4472	0.4647	0.4825	0.5012
	0.5214	0.5624	0.6475	0.7006	0.7297
	0.7581	0.7840	0.8051	0.8182	0.8226
	0.8270	0.8315	0.8361	0.8412	0.8468
	0.8513	0.8553	0.8595	0.8649	0.8702
	0.8761	0.8850	0.8942	0.9023	0.9105
	0.9274	0.9465	0.9634	0.9868	1.0000
Transect 3_1					
Area:	0.0020	0.0114	0.0223	0.0338	0.0459
	0.0586	0.0718	0.0855	0.0996	0.1141
	0.1291	0.1445	0.1604	0.1766	0.1933
	0.2104	0.2279	0.2459	0.2642	0.2829
	0.3019	0.3212	0.3409	0.3608	0.3811
	0.4017	0.4226	0.4439	0.4655	0.4874
	0.5096	0.5321	0.5550	0.5782	0.6018
	0.6258	0.6500	0.6747	0.6997	0.7251
	0.7509	0.7771	0.8036	0.8305	0.8578

			Untitled		
Hrad:	0.8855	0.9136	0.9421	0.9710	1.0000
	0.0111	0.0322	0.0586	0.0840	0.1090
	0.1327	0.1564	0.1809	0.2042	0.2273
	0.2494	0.2710	0.2931	0.3140	0.3353
	0.3558	0.3762	0.3972	0.4178	0.4395
	0.4604	0.4827	0.5036	0.5243	0.5452
	0.5650	0.5850	0.6054	0.6255	0.6452
	0.6647	0.6833	0.7033	0.7208	0.7383
	0.7575	0.7752	0.7914	0.8092	0.8264
	0.8432	0.8599	0.8771	0.8930	0.9082
width:	0.9242	0.9405	0.9559	0.9768	1.0000
	0.1935	0.3581	0.3837	0.4062	0.4253
	0.4457	0.4633	0.4767	0.4917	0.5061
	0.5215	0.5371	0.5508	0.5662	0.5801
	0.5949	0.6093	0.6225	0.6357	0.6468
	0.6588	0.6684	0.6797	0.6909	0.7016
	0.7134	0.7248	0.7355	0.7463	0.7573
	0.7685	0.7805	0.7908	0.8038	0.8167
	0.8274	0.8398	0.8537	0.8659	0.8785
	0.8914	0.9045	0.9169	0.9307	0.9451
	0.9586	0.9719	0.9859	0.9942	1.0000

Transect 3_2

Area:	0.0005	0.0021	0.0043	0.0071	0.0105
	0.0143	0.0187	0.0237	0.0290	0.0350
	0.0425	0.0540	0.0698	0.0890	0.1085
	0.1281	0.1479	0.1678	0.1879	0.2082
	0.2288	0.2495	0.2704	0.2915	0.3129
	0.3345	0.3564	0.3788	0.4016	0.4250
	0.4490	0.4734	0.4982	0.5234	0.5490
	0.5751	0.6017	0.6289	0.6567	0.6851
	0.7142	0.7440	0.7744	0.8053	0.8368
	0.8689	0.9015	0.9342	0.9670	1.0000

Hrad:	0.0142	0.0361	0.0555	0.0758	0.0968
	0.1178	0.1325	0.1518	0.1699	0.1856
	0.1934	0.1933	0.1833	0.1518	0.1838
	0.2155	0.2469	0.2781	0.3082	0.3374
	0.3670	0.3969	0.4264	0.4540	0.4820
	0.5090	0.5324	0.5550	0.5761	0.5919
	0.6133	0.6358	0.6581	0.6812	0.7038
	0.7210	0.7390	0.7550	0.7739	0.7879
	0.8000	0.8162	0.8343	0.8520	0.8689
	0.8860	0.9117	0.9411	0.9706	1.0000

width:	0.0351	0.0582	0.0779	0.0945	0.1093
	0.1222	0.1418	0.1566	0.1717	0.1898
	0.2871	0.4104	0.5427	0.5887	0.5925
	0.5966	0.6012	0.6055	0.6117	0.6191
	0.6251	0.6302	0.6357	0.6436	0.6505
	0.6585	0.6707	0.6837	0.6983	0.7192
	0.7332	0.7456	0.7580	0.7693	0.7809
	0.7984	0.8149	0.8337	0.8492	0.8702
	0.8933	0.9121	0.9287	0.9457	0.9635
	0.9812	0.9891	0.9929	0.9964	1.0000

Transect 3_3

Area:	0.0012	0.0049	0.0101	0.0162	0.0228
	0.0302	0.0382	0.0471	0.0566	0.0669

			Untitled		
Hrad:	0.0778	0.0894	0.1016	0.1144	0.1280
	0.1422	0.1572	0.1728	0.1891	0.2061
	0.2237	0.2419	0.2608	0.2804	0.3007
	0.3215	0.3428	0.3647	0.3871	0.4101
	0.4336	0.4576	0.4823	0.5076	0.5336
	0.5601	0.5874	0.6153	0.6438	0.6729
	0.7025	0.7328	0.7637	0.7953	0.8274
	0.8603	0.8939	0.9284	0.9637	1.0000
Hrad:	0.0206	0.0385	0.0646	0.0945	0.1203
	0.1471	0.1674	0.1903	0.2149	0.2340
	0.2576	0.2792	0.3030	0.3225	0.3413
	0.3617	0.3818	0.4033	0.4232	0.4437
	0.4646	0.4847	0.5054	0.5221	0.5438
	0.5681	0.5897	0.6125	0.6350	0.6561
	0.6790	0.6996	0.7169	0.7346	0.7565
	0.7769	0.7905	0.8133	0.8325	0.8517
	0.8714	0.8912	0.9099	0.9288	0.9493
	0.9623	0.9753	0.9925	1.0011	1.0000
width:	0.0571	0.1268	0.1557	0.1710	0.1899
	0.2052	0.2283	0.2476	0.2636	0.2857
	0.3020	0.3201	0.3353	0.3546	0.3749
	0.3932	0.4117	0.4286	0.4469	0.4645
	0.4814	0.4992	0.5160	0.5370	0.5529
	0.5658	0.5813	0.5955	0.6096	0.6250
	0.6386	0.6541	0.6728	0.6910	0.7054
	0.7209	0.7432	0.7566	0.7733	0.7900
	0.8063	0.8223	0.8394	0.8563	0.8716
	0.8940	0.9165	0.9354	0.9626	1.0000

Transect 3_4

Area:	0.0047	0.0139	0.0255	0.0377	0.0507
	0.0643	0.0785	0.0931	0.1081	0.1236
	0.1393	0.1555	0.1720	0.1888	0.2060
	0.2235	0.2414	0.2596	0.2782	0.2971
	0.3163	0.3359	0.3558	0.3760	0.3965
	0.4174	0.4385	0.4599	0.4815	0.5033
	0.5254	0.5477	0.5703	0.5930	0.6161
	0.6395	0.6632	0.6873	0.7115	0.7360
	0.7608	0.7858	0.8113	0.8371	0.8632
	0.8897	0.9167	0.9441	0.9718	1.0000

Hrad:	0.0171	0.0356	0.0607	0.0846	0.1083
	0.1311	0.1543	0.1781	0.2001	0.2239
	0.2480	0.2692	0.2923	0.3144	0.3371
	0.3573	0.3790	0.4004	0.4209	0.4419
	0.4612	0.4813	0.5025	0.5238	0.5430
	0.5633	0.5848	0.6057	0.6275	0.6491
	0.6699	0.6921	0.7144	0.7332	0.7508
	0.7678	0.7868	0.8061	0.8267	0.8473
	0.8654	0.8826	0.8972	0.9101	0.9296
	0.9435	0.9541	0.9690	0.9838	1.0000

width:	0.2779	0.3918	0.4201	0.4456	0.4682
	0.4906	0.5086	0.5224	0.5403	0.5519
	0.5618	0.5776	0.5885	0.6006	0.6112
	0.6257	0.6371	0.6484	0.6610	0.6723
	0.6859	0.6979	0.7082	0.7180	0.7303
	0.7410	0.7498	0.7593	0.7674	0.7754
	0.7843	0.7915	0.7982	0.8088	0.8206
	0.8329	0.8429	0.8526	0.8607	0.8687

			Untitled		
	0.8791	0.8903	0.9042	0.9197	0.9286
	0.9430	0.9607	0.9743	0.9878	1.0000
Transect 3_5					
Area:	0.0022	0.0066	0.0124	0.0195	0.0278
	0.0372	0.0474	0.0586	0.0705	0.0831
	0.0965	0.1104	0.1251	0.1403	0.1562
	0.1728	0.1899	0.2076	0.2261	0.2452
	0.2648	0.2852	0.3061	0.3274	0.3490
	0.3710	0.3933	0.4159	0.4389	0.4622
	0.4859	0.5098	0.5342	0.5589	0.5839
	0.6092	0.6349	0.6610	0.6874	0.7142
	0.7412	0.7687	0.7965	0.8246	0.8531
	0.8819	0.9111	0.9405	0.9702	1.0000
Hrad:	0.0193	0.0392	0.0564	0.0751	0.0945
	0.1136	0.1326	0.1516	0.1724	0.1916
	0.2122	0.2319	0.2506	0.2708	0.2881
	0.3071	0.3269	0.3439	0.3611	0.3796
	0.3975	0.4130	0.4347	0.4572	0.4804
	0.5026	0.5245	0.5467	0.5672	0.5897
	0.6109	0.6322	0.6519	0.6732	0.6944
	0.7136	0.7336	0.7538	0.7725	0.7934
	0.8137	0.8317	0.8515	0.8713	0.8889
	0.9095	0.9286	0.9491	0.9746	1.0000
width:	0.1120	0.1686	0.2205	0.2609	0.2954
	0.3287	0.3590	0.3883	0.4108	0.4359
	0.4567	0.4783	0.5014	0.5204	0.5445
	0.5650	0.5835	0.6064	0.6289	0.6487
	0.6692	0.6937	0.7072	0.7189	0.7292
	0.7408	0.7523	0.7632	0.7761	0.7860
	0.7974	0.8085	0.8213	0.8320	0.8425
	0.8553	0.8670	0.8782	0.8911	0.9013
	0.9120	0.9252	0.9362	0.9471	0.9603
	0.9702	0.9815	0.9913	0.9956	1.0000
Transect 3_6					
Area:	0.0025	0.0071	0.0130	0.0202	0.0288
	0.0386	0.0495	0.0616	0.0748	0.0891
	0.1045	0.1210	0.1386	0.1571	0.1763
	0.1959	0.2159	0.2361	0.2566	0.2773
	0.2983	0.3196	0.3412	0.3631	0.3852
	0.4076	0.4301	0.4530	0.4760	0.4992
	0.5226	0.5462	0.5700	0.5939	0.6181
	0.6424	0.6669	0.6915	0.7163	0.7413
	0.7664	0.7916	0.8170	0.8425	0.8683
	0.8942	0.9204	0.9468	0.9733	1.0000
Hrad:	0.0182	0.0360	0.0527	0.0677	0.0840
	0.0991	0.1154	0.1303	0.1459	0.1610
	0.1757	0.1898	0.2056	0.2222	0.2425
	0.2649	0.2875	0.3106	0.3333	0.3559
	0.3776	0.3985	0.4192	0.4417	0.4639
	0.4854	0.5076	0.5276	0.5505	0.5730
	0.5951	0.6171	0.6392	0.6612	0.6816
	0.7040	0.7267	0.7482	0.7699	0.7925
	0.8149	0.8370	0.8586	0.8792	0.8987
	0.9174	0.9369	0.9577	0.9789	1.0000
width:	0.1400	0.1964	0.2461	0.2991	0.3426

			Untitled		
	0.3892	0.4289	0.4731	0.5130	0.5537
	0.5949	0.6376	0.6741	0.7072	0.7273
	0.7398	0.7510	0.7602	0.7700	0.7791
	0.7901	0.8021	0.8140	0.8221	0.8305
	0.8397	0.8475	0.8585	0.8646	0.8712
	0.8782	0.8851	0.8918	0.8983	0.9068
	0.9125	0.9177	0.9243	0.9304	0.9354
	0.9405	0.9457	0.9516	0.9583	0.9661
	0.9747	0.9824	0.9886	0.9944	1.0000
Transect 5_1					
Area:	0.0033	0.0096	0.0176	0.0269	0.0373
	0.0488	0.0612	0.0745	0.0888	0.1041
	0.1203	0.1374	0.1555	0.1742	0.1933
	0.2126	0.2322	0.2520	0.2720	0.2923
	0.3127	0.3335	0.3544	0.3756	0.3970
	0.4186	0.4405	0.4625	0.4848	0.5073
	0.5300	0.5529	0.5760	0.5993	0.6229
	0.6466	0.6706	0.6947	0.7191	0.7436
	0.7684	0.7934	0.8185	0.8439	0.8694
	0.8951	0.9211	0.9472	0.9735	1.0000
Hrad:	0.0169	0.0353	0.0539	0.0727	0.0908
	0.1084	0.1262	0.1430	0.1599	0.1760
	0.1916	0.2077	0.2238	0.2443	0.2675
	0.2905	0.3133	0.3363	0.3590	0.3816
	0.4032	0.4253	0.4473	0.4690	0.4904
	0.5119	0.5333	0.5547	0.5759	0.5969
	0.6175	0.6384	0.6592	0.6799	0.7009
	0.7200	0.7404	0.7611	0.7819	0.8015
	0.8211	0.8412	0.8616	0.8816	0.9014
	0.9211	0.9403	0.9601	0.9800	1.0000
width:	0.1981	0.2731	0.3272	0.3704	0.4110
	0.4498	0.4850	0.5214	0.5555	0.5915
	0.6280	0.6619	0.6947	0.7132	0.7226
	0.7320	0.7411	0.7494	0.7578	0.7660
	0.7758	0.7842	0.7924	0.8009	0.8096
	0.8178	0.8260	0.8340	0.8419	0.8499
	0.8583	0.8660	0.8739	0.8815	0.8887
	0.8981	0.9058	0.9129	0.9198	0.9278
	0.9359	0.9432	0.9501	0.9573	0.9645
	0.9718	0.9795	0.9866	0.9934	1.0000
Transect 5_2					
Area:	0.0008	0.0029	0.0117	0.0240	0.0374
	0.0514	0.0659	0.0811	0.0971	0.1138
	0.1312	0.1490	0.1671	0.1857	0.2045
	0.2237	0.2431	0.2628	0.2827	0.3029
	0.3233	0.3439	0.3648	0.3858	0.4071
	0.4285	0.4501	0.4719	0.4938	0.5159
	0.5382	0.5607	0.5834	0.6063	0.6294
	0.6527	0.6763	0.7000	0.7239	0.7480
	0.7723	0.7968	0.8216	0.8465	0.8716
	0.8969	0.9225	0.9482	0.9740	1.0000
Hrad:	0.0121	0.0285	0.0260	0.0488	0.0710
	0.0941	0.1157	0.1356	0.1539	0.1729
	0.1939	0.2160	0.2368	0.2584	0.2800
	0.3011	0.3230	0.3449	0.3668	0.3883
	0.4099	0.4313	0.4532	0.4740	0.4956

***** Volume Page 45 Volume

Total Runoff 10 ⁶ ltr	Peak Runoff Subcatchment	Runoff Coeff CMS	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Total Runoff mm
118.94	0.50	0.524	25.00	0.00	0.00	10.75	13.11
14a1.50	0.61	0.515	25.00	0.00	0.00	11.00	12.88
14b2.54	1.12	0.451	25.00	0.00	0.00	12.75	11.27
14-EXT0.12	0.07	0.460	25.00	0.00	0.00	12.50	11.50

15			25.00	Untitled	0.00	0.00	10.75	13.11
2.83	1.37	0.524		0.00	0.00			
15a			25.00	0.00	0.00	23.75	1.15	
0.06	0.05	0.046		0.00	0.00			
16			25.00	0.00	0.00	10.75	13.11	
2.68	1.44	0.524		0.00	0.00			
16a			25.00	0.00	0.00	16.25	8.05	
0.13	0.11	0.322		0.00	0.00			
16b			25.00	0.00	0.00	10.75	13.11	
0.16	0.11	0.524		0.00	0.00			
204			25.00	0.00	0.00	12.50	11.50	
0.03	0.03	0.460		0.00	0.00	11.50	12.42	
205			25.00	0.00	0.00			
0.04	0.03	0.497		0.00	0.00	12.50	11.50	
206			25.00	0.00	0.00			
0.13	0.11	0.460		0.00	0.00	10.00	13.80	
207			25.00	0.00	0.00			
0.05	0.04	0.552		0.00	0.00	9.75	14.03	
208			25.00	0.00	0.00			
0.03	0.02	0.561		0.00	0.00	12.50	11.50	
209			25.00	0.00	0.00			
0.05	0.04	0.460		0.00	0.00	25.00	0.00	
EXT								
0.00	0.00	0.000						

Node Depth Summary

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J36	JUNCTION	0.18	0.21	255.21	0 04:46	0.21
J38	JUNCTION	0.00	0.00	259.65	0 00:00	0.00
J39	JUNCTION	0.00	0.00	258.62	0 00:00	0.00
J41	JUNCTION	0.01	0.22	253.40	0 01:41	0.22
J42	JUNCTION	0.01	0.28	252.28	0 01:43	0.28
J43	JUNCTION	0.02	0.33	252.08	0 01:48	0.33
J44	JUNCTION	0.01	0.21	251.71	0 01:51	0.21
J45	JUNCTION	0.01	0.27	251.37	0 01:56	0.27
J46	JUNCTION	0.02	0.34	251.05	0 02:02	0.34
J47	JUNCTION	0.03	0.42	250.74	0 02:08	0.42
J48	JUNCTION	0.07	0.49	250.67	0 02:15	0.49
J49	JUNCTION	0.07	0.41	250.58	0 02:37	0.41
J50	JUNCTION	0.07	0.39	250.56	0 02:41	0.39
J51	JUNCTION	0.07	0.35	250.52	0 02:42	0.35
J52	JUNCTION	0.05	0.27	250.44	0 02:54	0.27
J53	JUNCTION	0.02	0.17	250.33	0 02:52	0.17
J54	JUNCTION	0.04	0.24	249.58	0 03:00	0.24
J55	JUNCTION	0.02	0.13	248.78	0 03:03	0.13
J56	JUNCTION	0.02	0.19	246.31	0 03:12	0.19
H09	OUTFALL	0.00	0.00	0.00	0 00:00	0.00
H10	OUTFALL	0.00	0.00	257.66	0 00:00	0.00
H11	OUTFALL	0.00	0.00	0.00	0 00:00	0.00
H11a	OUTFALL	0.00	0.00	0.00	0 00:00	0.00
S12	OUTFALL	0.03	0.19	246.19	0 03:12	0.19
S13	OUTFALL	0.00	0.00	243.90	0 00:00	0.00
S14	OUTFALL	0.00	0.00	251.00	0 00:00	0.00
SWMF14	STORAGE	1.17	1.28	255.48	0 04:37	1.28
SWMF15	STORAGE	0.07	0.50	256.65	0 03:24	0.50

SWMF16	STORAGE	Untitled	0.21	1.37	260.17	0 02:42	1.37
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Node Inflow Summary

Total Inflow Volume Node ltr	Flow Balance Error Percent	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	10^6
J36		JUNCTION	0.000	0.032	0 04:37	0	
J38	0.242	JUNCTION	0.000	0.000	0 00:00	0	
J39	0.000 ltr	JUNCTION	0.000	0.000	0 00:00	0	
J41	0.000 ltr	JUNCTION	0.504	0.504	0 01:40	0.942	
J42	-0.220	JUNCTION	0.000	0.476	0 01:41	0	
J43	-0.307	JUNCTION	0.000	0.453	0 01:44	0	
J44	0.152	JUNCTION	0.000	0.425	0 01:50	0	
J46	-0.008	JUNCTION	0.000	0.474	0 01:52	0	
J45	-0.502	JUNCTION	0.000	0.450	0 01:58	0	
J47	-0.048	JUNCTION	0.000	0.409	0 02:03	0	
J48	0.127	JUNCTION	0.000	0.323	0 02:09	0	
J49	0.369	JUNCTION	0.000	0.251	0 02:16	0	
J50	0.625	JUNCTION	0.000	0.206	0 02:21	0	
J51	0.179	JUNCTION	0.000	0.155	0 02:30	0	
J52	0.323	JUNCTION	0.000	0.132	0 02:42	0	
J53	0.693	JUNCTION	0.000	0.121	0 02:52	0	
J54	0.046	JUNCTION	0.000	0.148	0 02:54	0	
J55	0.305	JUNCTION	0.000	0.138	0 03:03	0	
J56	0.196	JUNCTION	0.000	0.150	0 03:04	0	
H09	0.216	OUTFALL	0.026	0.026	0 01:40	0.0348	
H10	0.000	OUTFALL	0.029	0.029	0 01:40	0.0377	
H11	0.000	OUTFALL					

Untitled						
H11	0.000 ltr	OUTFALL	0.000	0.000	0 00:00	0
0						
H11a	0.000	OUTFALL	0.137	0.137	0 01:40	0.162
0.162						
S12	0.000	OUTFALL	0.000	0.119	0 03:12	0
0.923						
S13	0.000	OUTFALL	0.109	0.110	0 01:40	0.128
3.35						
S14	0.000	OUTFALL	0.086	0.086	0 01:40	0.102
0.102						
SWMF14	0.001	STORAGE	1.800	1.800	0 01:40	4.15
6.38						
SWMF15	-0.004	STORAGE	1.417	1.417	0 01:40	2.89
2.89						
SWMF16	0.002	STORAGE	1.547	1.547	0 01:40	2.84
2.84						

Node Surge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Storage Volume Summary

of Max	Maximum	Average	Avg	Evap	Exfil	Maximum	Max	Time
Occurrence	Outflow	Volume	Pcnt	Pcnt	Pcnt	Volume	Pcnt	
Storage Unit	Unit	1000 m3	Full	Loss	Loss	1000 m3	Full	days
hr:min	CMS							

SWMF14		4.267	11	0	0	5.944	16	0
04:37	0.032							
SWMF15		0.260	2	0	100	1.806	13	0
03:24	0.124							
SWMF16		0.232	1	0	100	1.666	8	0
02:42	0.319							

Outfall Loading Summary

Flow	Avg	Max	Total
Freq	Flow	Flow	Volume

Untitled				
Outfall Node	Pcnt	CMS	CMS	10^6 ltr
H09	8.75	0.002	0.026	0.035
H10	8.89	0.002	0.029	0.038
H11	0.00	0.000	0.000	0.000
H11a	8.77	0.011	0.137	0.162
S12	93.85	0.006	0.119	0.923
S13	97.95	0.020	0.110	3.353
S14	8.31	0.007	0.086	0.102
System	32.36	0.048	0.388	4.612

Link Flow Summary

Link	Type	Maximum Flow CMS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.000	0 00:00	0.00	0.00	0.00
C12	CONDUIT	0.000	0 00:00	0.00	0.00	0.00
C13	CONDUIT	0.032	0 04:46	0.74	0.00	0.05
C2_18	CHANNEL	0.476	0 01:41	0.55	0.00	0.12
C2_19	CHANNEL	0.453	0 01:44	0.36	0.01	0.16
C2_20	CHANNEL	0.425	0 01:50	0.39	0.02	0.20
C2_21	CHANNEL	0.474	0 01:52	0.39	0.01	0.16
C2_22	CHANNEL	0.450	0 01:58	0.39	0.00	0.13
C2_23	CHANNEL	0.409	0 02:03	0.45	0.00	0.16
C2_24	CHANNEL	0.323	0 02:09	0.38	0.00	0.17
C2_25	CHANNEL	0.251	0 02:16	0.35	0.01	0.18
C2_26	CHANNEL	0.206	0 02:21	0.27	0.03	0.18
C2_27	CHANNEL	0.155	0 02:30	0.25	0.03	0.20
C2_28	CHANNEL	0.132	0 02:42	0.24	0.03	0.17
C2_29	CHANNEL	0.121	0 02:52	0.19	0.01	0.08
C2_30	CHANNEL	0.148	0 02:54	0.42	0.00	0.07
C2_31	CHANNEL	0.138	0 03:03	0.40	0.00	0.06
C2_32	CHANNEL	0.150	0 03:04	0.73	0.00	0.04
C2_33	CHANNEL	0.119	0 03:12	0.28	0.00	0.07
OR1	ORIFICE	0.000	0 00:00			0.00
OR16	ORIFICE	0.032	0 04:37			1.00
W1	WEIR	0.000	0 00:00			0.00
W11	WEIR	0.000	0 00:00			0.00
W12	WEIR	0.000	0 00:00			0.00

Flow Classification Summary

Adjusted		Fraction of Time in Flow Class						
/Actual		Up	Down	Sub	Sup	Up	Down	Norm
Inlet	Conduit	Dry	Dry	Dry	Crit	Crit	Crit	Crit
Ctrl	Length	Dry	Dry	Dry	Crit	Crit	Crit	Ltd

	Untitled								
-									
C1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C12	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C13	1.00	0.03	0.00	0.00	0.00	0.00	0.00	0.97	0.00
C2_18	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.97
C2_19	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.96
C2_20	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00
C2_21	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.96
C2_22	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.96
C2_23	1.00	0.04	0.00	0.00	0.96	0.00	0.00	0.00	0.96
C2_24	1.00	0.04	0.00	0.00	0.96	0.00	0.00	0.00	0.88
C2_25	1.00	0.04	0.00	0.00	0.96	0.00	0.00	0.00	0.00
C2_26	1.00	0.04	0.00	0.00	0.96	0.00	0.00	0.00	0.00
C2_27	1.00	0.04	0.00	0.00	0.96	0.00	0.00	0.00	0.00
C2_28	1.00	0.05	0.00	0.00	0.95	0.00	0.00	0.00	0.00
C2_29	1.00	0.05	0.00	0.00	0.95	0.00	0.00	0.00	0.00
C2_30	1.00	0.05	0.00	0.00	0.95	0.00	0.00	0.00	0.94
C2_31	1.00	0.05	0.00	0.00	0.95	0.00	0.00	0.00	0.00
C2_32	1.00	0.06	0.00	0.00	0.94	0.00	0.00	0.00	0.31
C2_33	1.00	0.06	0.00	0.00	0.94	0.00	0.00	0.00	0.62

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Thu Jul 20 11:38:31 2017
Analysis ended on: Thu Jul 20 11:38:37 2017
Total elapsed time: 00:00:06



BURNSIDE

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Appendix J

Stormwater Quality Control

**Average Annual Sediment Removal Rates (%) using a CB Shield
(based on ETV Sediment - 1 to 1000 micron Particle Size Distribution)**

Area to CB (ha)	Imperviousness ¹ (%)					
	20%	35%	50%	65%	80%	100%
0.02	57%	57%	57%	57%	56%	56%
0.05	56%	56%	56%	55%	55%	54%
0.10	56%	55%	54%	53%	52%	51%
0.20	54%	53%	51%	49%	48%	46%
0.30	53%	50%	48%	46%	45%	43%
0.40	51%	48%	46%	44%	42%	40%
0.50	50%	47%	44%	42%	40%	38%
0.60	49%	45%	43%	40%	39%	36%

Notes:

1. Runoff Coefficient 'C' is approximately equal to $0.05 + 0.9 \times \text{Impervious Fraction}$.
2. Above chart is based on long term continuous hydrologic analysis of Toronto, Ontario (Bloor St) rainfall data.
3. Assumes 0.6 m sump in CB and that maintenance is performed (i.e. CB cleaning) when required by sediment/pollutant build-up or otherwise.
4. See accompanying chart for suggested maintenance scheduling - AND - get CB Shield Inc. to monitor it for you in field.
5. Sediment/Pollutant removal rates based on third party certified laboratory testing using ETV sediment (PSD analysis available on request).
6. See additional discussion regarding scour protection from CB Shield during more infrequent runoff events.

CDS Average Annual Efficiency For TSS Removal & Total Annual Volume Treated

Area : 21.58 ha
 Impervious : 57 %
 CDS Model: PMSU5678-10 (OFFLINE)
 Flowrate: 708 L/s
 IDF Data: Barrie
 PSD: FINE

Engineer: R.J. Burnside & Associates Limited
 Contact: Jordan McIntyre, EIT
 Date: 5-Jul-17

Project: Blue Sky and LM Barrie
 Location: Barrie, ON
 OGS ID: OGS

Return	Period	Flow	TSS Percentage Captured	Treated Flow Volume	Total Flow Volume	Frequency of Occurrence	System Flow	CDS Flow	By-Pass Flow	Volume Percentage Treated
month / yr	Yr	l/s	%	litres	litres	%	l/s	l/s	l/s	%
1m	0.08	180.51	93.9	250741	250741	91.70	180.51	181	0.00	100.00
2m	0.17	297.66	90.8	413467	413467	83.33	297.66	298	0.00	100.00
3m	0.25	396.44	88.1	550678	550678	75.00	396.44	396	0.00	100.00
4m	0.33	487.25	85.6	676821	676821	66.70	487.25	487	0.00	100.00
5m	0.42	565.01	83.7	775715	775716	58.30	565.01	565	0.00	100.00
6m	0.50	629.64	81.7	874610	874610	50.00	629.64	630	0.00	100.00
7m	0.58	689.59	79.9	939784	950062	41.70	689.59	690	0.00	99.07
8m	0.67	744.56	78.0	1004958	1025513	33.30	744.56	708	36.64	98.13
9m	0.75	792.59	76.2	1070132	1100965	25.00	792.59	708	84.67	97.20
10m	0.83	838.86	74.4	1103573	1161397	16.70	838.86	708	130.94	95.23
11m	0.92	882.57	72.5	1137014	1221829	8.30	882.57	708	174.65	93.25
1y	1	923.11	70.7	1170454	1282261	1.00	923.11	708	215.19	91.28
2y	2	1292.52	58.2	1368682	1795397	0.50	1292.52	708	584.60	76.23
5y	5	2055.42	43.2	1637358	2855111	0.20	2055.42	708	1347.49	57.35
10y	10	2665.09	36.0	1781263	3701983	0.10	2665.09	708	1957.16	48.12
25y	25	3460.07	29.8	1926644	4806269	0.04	3460.07	708	2752.15	40.09
50y	50	4177.91	25.8	2019649	5803393	0.02	4177.91	708	3469.99	34.80
100y	100	5010.60	22.5	2115488	6960053	0.01	5010.60	708	4302.67	30.39
Q-ave		618.98 l/s		20817029.6	36206267.5					

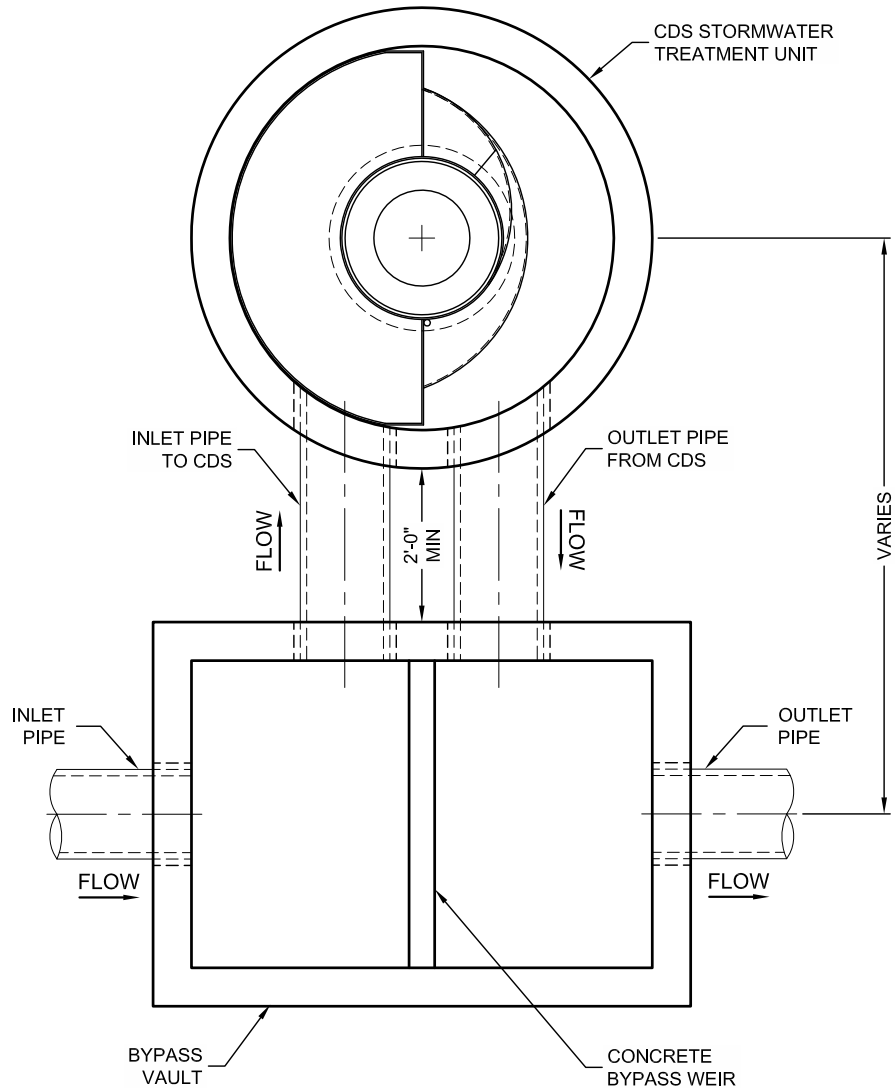
Average Annual TSS Removal Efficiency [%]: **81.3** Ave. Ann. T. Volume [%]: **96.5**

Notes:

- 1) CDS Efficiency based on testing conducted at the University of Central Florida
- 2) CDS design flowrate and scaling based on standard manufacturer model & product specifications



I:\STORMWATER\COM\OPS\22 CDS\40 STANDARD DRAWINGS\OFFLINE LAYOUTS DWG\OFFLINE CDS-C LAYOUT BYPASS VAULT STRUCTURE.DWG 3/12/2013 3:35 PM



THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,788,848; 6,641,720; 6,511,595; 6,581,783; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

CONTECH
ENGINEERED SOLUTIONS LLC

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9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069

800-338-1122

513-645-7000

513-645-7993 FAX

CDS STORMWATER TREATMENT SYSTEM TYPICAL OFFLINE LAYOUT WITH BYPASS VAULT STRUCTURE

DATE: 03/12/13

SCALE: NONE

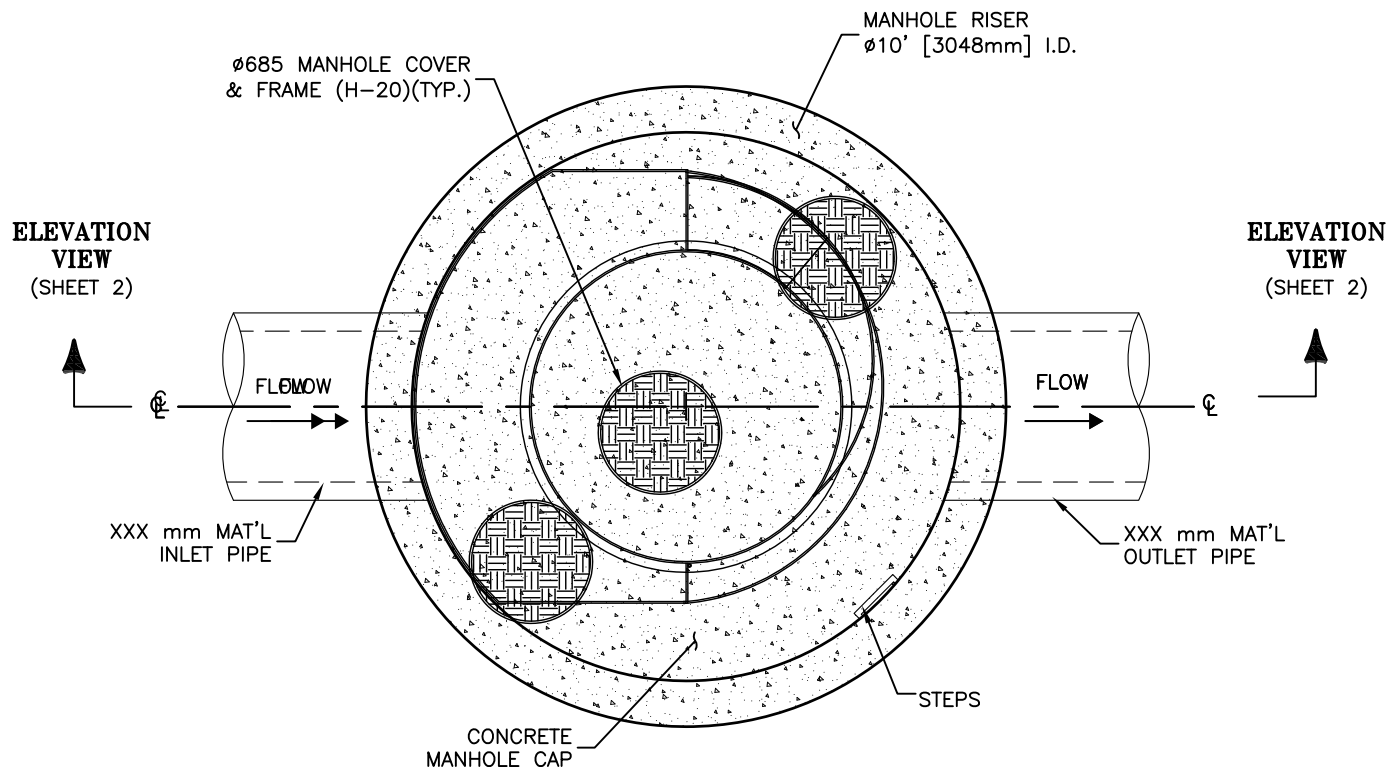
PROJECT No.: N/A

SEQ. No.: N/A

DRAWN: N/A

CHECKED: N/A

PLAN VIEW



CDS MODEL CDS5678 25 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

ANCHOR

CONTECH[®]
CONSTRUCTION PRODUCTS INC.
www.contech-cpi.com
200 Enterprise Drive, Scarborough, ME 04074
877-907-8676 207-885-9830 207-885-9825 FAX

PROJECT NAME
LOCATION

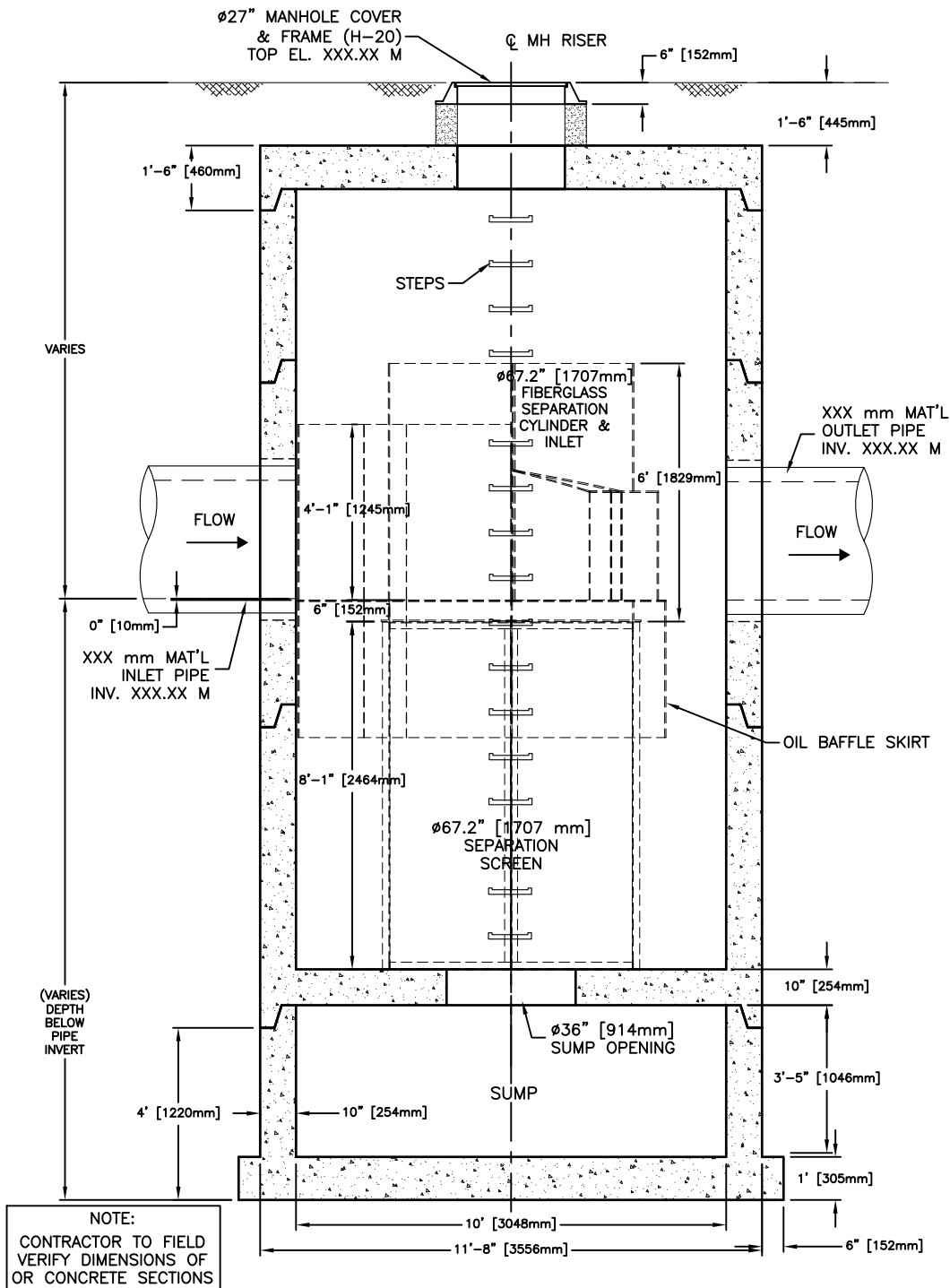
JOB#	XXXXX-XX
DATE.	XX/XX/XX
DRAWN	XXX
APPROV.	

SCALE
1" = 3.5'

SHEET

1

ELEVATION VIEW



CDS MODEL CDS5678 25 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

ANCHOR

CONTECH
CONSTRUCTION PRODUCTS INC.
www.contech-cpi.com
200 Enterprise Drive, Scarborough, ME 04074
877-907-8676 207-885-9830 207-885-9825 FAX

PROJECT NAME
LOCATION

JOB# XXXXX-XX
DATE. XX/XX/XX
DRAWN XXX
APPROV.

SCALE
1" = 4'

SHEET

2



BURNSIDE

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Appendix K

Phosphorous Budget



Project DEVELOPMENT Summary

DEVELOPMENT: 039296 - Blue Sky - Hewitt's Creek

Subwatershed: Hewitts Creek

Total Pre-Development Area (ha):	52.81	Total Pre-Development Phosphorus Load (kg/yr):	5.75
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Pre-Development Land Use	Area (ha)	P coeff. (kg/ha)	P Load (kg/yr)
Cropland	17.66	0.19	3.36
Forest	5.76	0.05	0.29
Hay-Pasture	22.57	0.07	1.58
Low Intensity Development	1.61	0.13	0.21
Transition	5.21	0.06	0.31

DEVELOPMENT: 039296 - Blue Sky - Hewitt's Creek**Subwatershed: Hewitts Creek****POST-DEVELOPMENT LOAD**

Post-Development Land Use	Area (ha)	P coeff. (kg/ha)	Best Management Practice applied with P Removal Efficiency	P Load (kg/yr)
High Intensity - Residential	5.76	1.32	Constructed Wetlands	77% 1.75
High Intensity - Residential	3	1.32	Perforated Pipe Infiltration/Exfiltration Systems	87% 0.51
High Intensity - Residential	36.59	1.32	Treatment Train Approach	100% 0.00
<i>Runoff directed towards perforated pipe infiltration system, eventually flows to infiltration basin.</i>				
Low Intensity Development	0.14	0.13	Perforated Pipe Infiltration/Exfiltration Systems	87% 0.00
Low Intensity Development	0.17	0.13	Treatment Train Approach	100% 0.00
<i>Runoff directed towards perforated infiltration system, eventually flows to infiltration basin.</i>				
Low Intensity Development	3.81	0.13	NONE	0% 0.50
Open Water	1.67	0.26	NONE	0% 0.43
Transition	1.67	0.06	NONE	0% 0.10

Post-Development Area Altered: **52.81**Total Pre-Development Area: **52.81**Unaffected Area: **0****P Load (kg/yr)**Pre-Development: **5.75**Post-Development: **60.93**Change (Pre - Post): **-55.19****961% Net Increase in Load**Post-Development (with BMPs): **3.30**Change (Pre - Post): **2.45****43% Net Reduction in Load**

DEVELOPMENT: 039296 - Blue Sky - Hewitt's Creek
Subwatershed: Hewitts Creek

CONSTRUCTION PHASE LOAD

SUMMARY WITH IMPLEMENTATION OF BMPs		P Load (kg/yr)
Pre-Development:		5.75
Construction Phase Amortized Over 8 Years :		to be determined
Post-Development:		3.30
Post-Development + Amortized Construction:		to be determined
Pre-Development Load - Post-Development Load:		2.45
Conclusion:		43% Reduction in Load
Pre-Development Load - (Post-Development + Amortized Construction Load):		to be determined
Conclusion:		to be determined
Based on a comparison of Pre-Development and Post-Development loads, and in consideration of Construction Phase loads, the Ministry would encourage the Municipality to:		



Project DEVELOPMENT Summary

DEVELOPMENT: 039296 - Blue Sky - Sandy Cove Creek

Subwatershed: Innisfil Creeks

Total Pre-Development Area (ha):	47.67	Total Pre-Development Phosphorus Load (kg/yr):	6.36
----------------------------------	--------------	--	-------------

Pre-Development Land Use	Area (ha)	P coeff. (kg/ha)	P Load (kg/yr)
Cropland	24.97	0.19	4.74
Forest	2.36	0.05	0.12
Hay-Pasture	16.68	0.07	1.17
Low Intensity Development	1.58	0.13	0.21
Open Water	0	0.26	0.00
Transition	2.08	0.06	0.12

DEVELOPMENT: 039296 - Blue Sky - Sandy Cove Creek**Subwatershed: Innisfil Creeks****POST-DEVELOPMENT LOAD**

Post-Development Land Use	Area (ha)	P coeff. (kg/ha)	Best Management Practice applied with P Removal Efficiency	P Load (kg/yr)
High Intensity - Comm/Industrial	2.43	1.82	Treatment Train Approach	97% 0.13
<i>Runoff directed towards perforated pipe infiltration system, eventually flows to constructed wetlands.</i>				
High Intensity - Residential	6.57	1.32	Other	95% 0.43
<i>Runoff flows through perforated pipe system. Directed towards future SWMF, assumed to be wet detention pond.</i>				
High Intensity - Residential	0.62	1.32	Wet Detention Ponds	63% 0.30
<i>Runoff to discharge to future SWMF, assumed to be wet detention pond.</i>				
High Intensity - Residential	1.72	1.32	Perforated Pipe Infiltration/Exfiltration Systems	87% 0.30
High Intensity - Residential	6.3	1.32	Constructed Wetlands	77% 1.91
High Intensity - Residential	23.9	1.32	Treatment Train Approach	97% 0.95
<i>Runoff directed towards perforated pipe infiltration system, eventually flows to constructed wetlands.</i>				
Low Intensity Development	0.19	0.13	Perforated Pipe Infiltration/Exfiltration Systems	87% 0.00
Low Intensity Development	2.02	0.13	Treatment Train Approach	97% 0.01
<i>Runoff directed towards perforated pipe infiltration system, eventually flows to constructed wetlands.</i>				
Open Water	1.96	0.26	NONE	0% 0.51
Transition	1.96	0.06	NONE	0% 0.12

Post-Development Area Altered: **47.67**Total Pre-Development Area: **47.67**Unaffected Area: **0****P Load (kg/yr)**Pre-Development: **6.36**Post-Development: **56.96**Change (Pre - Post): **-50.60****796% Net Increase in Load**Post-Development (with BMPs): **4.66**Change (Pre - Post): **1.70****27% Net Reduction in Load**

DEVELOPMENT: 039296 - Blue Sky - Sandy Cove Creek
Subwatershed: Innisfil Creeks

CONSTRUCTION PHASE LOAD

SUMMARY WITH IMPLEMENTATION OF BMPs		P Load (kg/yr)
Pre-Development:		6.36
Construction Phase Amortized Over 8 Years :		to be determined
Post-Development:		4.66
Post-Development + Amortized Construction:		to be determined
Pre-Development Load - Post-Development Load:		1.70
Conclusion:		27% Reduction in Load
Pre-Development Load - (Post-Development + Amortized Construction Load):		to be determined
Conclusion:		to be determined
Based on a comparison of Pre-Development and Post-Development loads, and in consideration of Construction Phase loads, the Ministry would encourage the Municipality to:		