APPENDIX B

TESTPIT LOGS

FOX-C (EKALUGAD LAKE) DEW LINE SITE
2004 SITE INVESTIGATION
TESTPIT LOGS

Testpit	Depth (m)	Description
TP-01		Beach Area (POL tanks pad)
	0.0	SAND and GRAVEL – trace silt, medium to coarse grained sand, maximum aggregate size 50 mm, sub-angular to rounded, damp, brown (Sample at 0.2 – 0.3)
	0.8	SILT – sandy, gravelly, some clay, fine grained sand, grey, frozen
	0.83	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-02		Borrow Area 4 (north portion)
	0.0	SILT – clayey, some gravel, trace fine sand, trace cobbles, occasional boulders, maximum aggregate size 250 mm, sub-angular to sub-rounded, damp, non-plastic, blocky, grey (Sample at 0.2 – 0.3, M.C. = 20.7%)
	0.6	SAND – silty, gravelly, some clay, trace cobbles, fine grained sand, maximum aggregate size 50 mm, subangular to rounded, damp grey/brown (Sample at 0.7 – 0.8, M.C. = 11.8%)
	1.2	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-03		Beach Road (near Borrow Area 4, east side of road)
	0.0	SILT – clayey, some gravel, trace fine sand, trace cobbles, occasional boulders, sub-angular to sub-rounded, non-plastic, damp to wet, grey (Sample at 0.3 – 0.4)
	0.9	ICE and SILT – ice 50 – 60%
	0.9	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-04		Tier II Facility Location 1 (west portion)
	0.0	SILT and SAND – some clay, some gravel, some cobbles, occasional boulders, subangular to rounded, damp, mottled tan/brown/grey (Sample at 0.3 – 0.4, M.C. = 19.8%)
	0.9	Permafrost – Vs at 20 – 30%
	0.9	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-05		Borrow Area 3 (east portion)
	0.0	SAND – silty, some gravel, trace cobbles, fine to medium grained sand, subrounded to subangular, moist, mottled tan/brown/grey
	0.2	Becomes trace gravel (Sample at 0.5 – 0.6, Gravel = 6%, Sand = 71%, Silt/Clay = 23%, M.C. = 1.8%)
	1.4	Water infiltration at permafrost contact
	1.4	END OF TESTPIT – REFUSAL ON PERMAFROST

Testpit	Depth (m)	Description
TP-06		Borrow Area 3 (west portion)
	0.0	SAND – trace to some silt, some gravel, trace cobbles, medium grained sand, moist, tan/brown
	0.25	Becomes trace gravel (Sample at 0.4 – 0.5)
	1.4	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-07		Borrow Area 3 (south portion)
	0.0	SAND – silty, some gravel, some cobbles, fine grained sand, subangular to rounded, damp, brown
	0.15	Becomes trace gravel
	1.1	Water content increases (Sample at 1.1 – 1.2)
	1.2	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-08		Lake Road (south road edge)
	0.0	SAND – some silt to silty, fine to medium grained, moist, tan, gravel and cobbles at surface (Sample at 0.4 – 0.5)
	1.1	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-09		Borrow Area 4 (middle portion)
	0.0	SILT – clayey, trace fine sand, trace gravel, low plasticity, damp, grey (Sample at 0.1 – 0.2, M.C. = 25.9%)
	0.5	Moisture content increases with depth (Sample at 0.7 – 0.8, M.C. = 33.7%)
	1.0	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-10		Borrow Area 4 (south portion)
	0.0	SAND and SILT – gravelly, some clay, some cobbles, fine grained sand, subangular to rounded, maximum aggregate size 150 mm, non-plastic, damp to wet, non-plastic, grey/brown (Sample at 0.3 – 0.4, M.C. = 12.0%)
	1.0	END OF TESTPIT Boulders present up to 1.5 m dia., approximately 5% of surface
TP-11		Borrow Area 4 (south portion)
	0.0	SILT – clayey, gravelly, some cobbles, trace fine grained sand, maximum aggregate size 150 mm, subrounded to subangular, non-plastic, damp, grey
	0.3	Becomes trace gravel, trace cobbles, moisture content increases, plastic
	0.7	Permafrost - ICE and SOIL – 50%
	0.7	END OF TESTPIT – REFUSAL ON PERMAFROST

Testpit	Depth (m)	Description
TP-12		Tier II Facility Location 1 (south portion)
	0.0	SILT – clayey, trace cobbles, trace fine grained sand, maximum aggregate size 150 mm, subrounded to rounded, plastic, damp, grey/brown (Sample at 0.15 – 0.2, M.C. = 24.3%) (Sample at 0.5 – 0.6, M.C. = 22.7%)
	0.4	Moisture content increases
	0.7	Permafrost – Vs = 40%
	0.8	Vs = 20% (Sample at 0.8 – 0.85, M.C. = 40.2%)
	0.9	END OF TESTPIT – REFUSAL ON PERMAFROST Cobbles and Boulders on surface up to 0.5 m
TP-13		Tier II Facility Location 1 (east portion)
	0.0	SILT – clayey, trace gravel, trace cobbles, trace fine grained sand, plastic, damp to wet, grey/brown
	0.1	200 mm lense of fine grained sand, gravelly, some cobbles
	0.8	SAND – silty, some clay, fine grained sand, damp brown (Sample at 0.9 – 1.0, M.C. = 16.4%)
	1.1	END OF TESTPIT – REFUSAL ON PERMAFROST Cobbles and Boulders on surface up to 0.5 m
TP-14		Tier II Facility Location 1 (north portion)
	0.0	SILT – clayey, trace gravel, trace cobbles, trace fine grained sand, plastic, damp to wet, grey/brown
	0.75	Permafrost – ICE – 10 % soil
	0.8	ICE and SOIL – 50%
	0.85	END OF TESTPIT – REFUSAL ON PERMAFROST Cobbles and Boulders on surface up to 0.5 m
TP-15		Borrow Area 3 (north portion)
	0.0	SAND – silty, fine grained sand, damp tan, gravel and cobbles at surface
	0.15	SAND and SILT – fine grained sand, damp, grey
	0.25	SAND – gravelly, trace silt, well graded, maximum aggregate size 30 mm, subangular to subrounded, damp, orange/brown
	0.45	Becomes med to coarse grained, maximum aggregate size 75 mm, salt and pepper (Sample at 0.6 – 0.7, Gravel = 25%, Sand = 74%, Silt/Clay = 1%, M.C. = 1.2%)
	1.2	END OF TESTPIT
TP-16		Borrow Area 3 (north portion)
	0.0	SAND – gravelly, trace silt, well graded, maximum aggregate size 50 mm, subangular to subrounded, damp, tan/brown
	0.75	Becomes some silt, fine grained sand
	1.0	END OF TESTPIT

Testpit	Depth (m)	Description
TP-17		Borrow Area 3 (west portion)
	0.0	SAND – trace gravel, trace silt, medium grained, damp, brown, gravel and cobbles at surface
	1.2	END OF TESTPIT
TP-18		Borrow Area 3 (north portion)
	0.0	SAND – trace gravel, trace silt, medium grained, damp, brown, gravel and cobbles at surface
	0.5	SAND – some silt, fine to medium grained sand, damp, grey
	0.6	SAND – gravelly, trace silt, well graded, maximum aggregate size 75 mm, subrounded to subrounded, damp, tan
	1.2	END OF TESTPIT
TP-19		Borrow Area 3 (south portion)
	0.0	ORGANICS - rootmat
		SAND – some silt, trace gravel, fine to medium grained sand, damp, dark brown
	0.6	50 mm lenses of sand and gravel
	0.9	Water infiltration
		(Sample at 0.3 – 0.4, M.C. = 17.4%)
	1.2	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-20		Borrow Area 3 (southwest portion)
	0.0	ORGANICS - rootmat
	0.02	SAND – silty, trace gravel, fine to medium grained sand, damp, mottled grey/tan/brown
		(Sample at 0.3 – 0.4, M.C. = 10.5%)
	0.8	SAND – trace gravel, trace silt, coarse grained, saturated, brown
	0.8	Water Infiltration
		(Sample at 0.9 – 1.0, M.C. = 11.8%)
	1.2	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-21		Borrow Area 3 (southeast portion)
	0.0	ORGANICS - rootmat
	0.02	SAND and SILT – some clay, trace gravel, trace cobbles, fine to medium grained sand, damp to wet, mottled grey/tan/brown
	1.0	Water infiltration
		(Sample at 0.3 – 0.4, M.C. = 23.9%)
	1.0	END OF TESTPIT – REFUSAL ON PERMAFROST

Testpit	Depth (m)	Description
TP-22		Borrow Area 5 (south portion)
	0.0	SAND and GRAVEL – some cobbles, trace silt, well graded, maximum aggregate size 250 mm, subangular, to rounded, damp, brown
	0.4	Becomes med to coarse grained sand (Sample at 0.8 – 1.0, Gravel = 42%, Sand = 55%, Silt/Clay = 3%, M.C. = 6.1%)
	1.8	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-23		Borrow Area 5 (centre portion)
	0.0	ORGANICS - rootmat
	0.02	SAND – some silt, fine to medium grained sand, dark brown
	0.2	SAND and GRAVEL – some cobbles, trace silt, well graded, maximum aggregate size 150 mm, subangular, to rounded, damp, brown
	0.4	Becomes med to coarse grained sand
	1.2	Water infiltration
	1.5	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-24		Borrow Area 5 (centre portion)
	0.0	SAND – some silt, fine to medium grained sand, dark brown
	1.5	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-25		Borrow Area 5 (northwest portion)
	0.0	SAND – some silt, fine to medium grained sand, dark brown
	0.2	SAND and GRAVEL – trace silt, well graded, maximum aggregate size 50 mm, subangular, to rounded, damp, brown
	1.0	Becomes med to coarse grained sand (Sample at 0.4 – 0.5)
	1.4	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-26		Borrow Area 5 (west portion)
	0.0	SAND– some gravel, trace cobbles, trace silt, well graded, maximum aggregate size 200 mm, subangular, to rounded, damp, brown, varying layers of sand and gravel throughout testpit (Sample at 0.3 – 0.7, Gravel = 19%, Sand = 78%, Silt/Clay = 3%, M.C. = 3.9%)
	1.5	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-27		Borrow Area 5 (southwest portion)
	0.0	SAND – some silt, fine to medium grained sand, dark brown
	0.15	SAND and GRAVEL – some cobbles, trace silt, well graded, maximum aggregate size 150 mm, subangular, to rounded, damp, brown
	0.6	400 mm layer of SAND – fine to medium grained
	1.5	END OF TESTPIT - REFUSAL ON PERMAFROST

Testpit	Depth (m)	Description
TP-28		Borrow Area 5 (north portion)
	0.0	ORGANICS - rootmat
	0.1	SAND – some silt, fine to medium grained sand, dark brown
	0.2	SAND and GRAVEL – trace silt, well graded, maximum aggregate size 50 mm, subangular, to rounded, damp, brown
	1.4	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-29		Borrow Area 5 (east portion)
	0.0	ORGANICS - rootmat
	0.1	SAND – trace silt, fine to medium grained sand, dark brown
	0.2	Becomes medium grained (Sample at 0.3 – 0.5, M.C. = 3.1%)
	0.7	50 mm lense of Gravel – maximum aggregate size 50 mm
	1.1	SAND and GRAVEL – trace silt, medium grained sand, maximum aggregate size 75 mm, subangular, to rounded, damp, brown
	1.3	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-30		Borrow Area 5 (east portion)
	0.0	ORGANICS - rootmat
	0.1	SAND – some silt, fine to medium grained sand, dark brown (Sample at 0.5 – 0.6, M.C. = 10.3%)
	1.2	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-31		Borrow Area 5 (northeast portion)
	0.0	ORGANICS - rootmat
	0.2	SAND – some silt, fine to medium grained sand, dark brown (Sample at 0.3 – 0.4, M.C. = 10.2%)
	1.2	END OF TESTPIT - REFUSAL ON PERMAFROST
TP-32		NWH Landfill Location 2 (south portion)
	0.0	ORGANICS - rootlets
	0.1	SAND – some silt, trace cobbles, fine to medium grained sand, maximum aggregate size 250 mm, subrounded to rounded, damp, brown, rootlets to 300 mm
	0.3	Becomes dark brown
	1.0	Pockets of grey fine grained sand and silt (Sample at 0.4 – 0.5, M.C. = 18.7%)
	1.2	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-33		NWH Landfill Location 2 (east portion)
	0.0	ORGANICS - rootlets
	0.1	SAND – some silt, trace cobbles, fine to medium grained sand, maximum aggregate size 250 mm, subrounded to rounded, damp, brown, rootlets to 300 mm
	0.35	Becomes dark brown
	1.3	END OF TESTPIT – REFUSAL ON PERMAFROST

Testpit	Depth (m)	Description
TP-34		NWH Landfill Location 2 (northwest portion)
	0.0	ORGANICS - rootlets
	0.1	SAND –trace silt, trace cobbles, occasional boulder up to 400 mm, fine to medium grained sand, subrounded to rounded, damp, brown
	1.0	Becomes coarser grained, grey (Sample at 0.15 – 0.25, M.C. = 9.9%)
	1.2	END OF TESTPIT – REFUSAL ON PERMAFROST Boulders present at the surface
TP-35		Lake Road (north side)
	0.0	SAND – some silt, fine grained, moist, tan, gravel and cobbles at surface
	1.0	END OF TESTPIT
TP-36		Lake Road (north side)
	0.0	SAND – some silt, fine grained, moist, tan, gravel and cobbles at surface
	1.1	END OF TESTPIT
TP-37		Borrow Area 2 (southwest portion)
	0.0	SAND and GRAVEL – some cobbles, trace silt, medium to coarse grained, maximum aggregate size 100 mm, sub angular to rounded, moist, brown Varying layers of finer and coarser material, brown
	1.2	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-38		Borrow Area 2 (east portion)
	0.0	SAND and GRAVEL – some cobbles, trace silt, medium to coarse grained, maximum aggregate size 200 mm, sub angular to rounded, moist, brown
	0.4	SAND – trace silt, fine to medium grained, pockets of grey gravel and sand some silt, damp, varying orange/tan brown layers
	1.15	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-39		Borrow Area 2 (north portion)
	0.0	SAND and GRAVEL – some cobbles, trace silt, medium to coarse grained, maximum aggregate size 200 mm, sub angular to rounded, moist, brown
	0.3	SAND – trace silt, fine to medium grained, pockets of grey gravel and sand some silt, damp, varying orange/tan brown layers
	1.0	100 mm lense of grey silt and sand
	1.1	SAND and GRAVEL – some cobbles, trace silt, coarse grained sand, maximum aggregate size 100 mm, sub angular to rounded, damp, grey
	1.5	END OF TESTPIT – REFUSAL ON PERMAFROST
TP-40		Borrow Area 2 (top of stockpile)
	0.0	SAND and GRAVEL – some cobbles, trace silt, coarse grained sand, maximum aggregate size 200 mm, sub angular to rounded, moist, grey (Sample at 0.3 – 1.0, Gravel = 33%, Sand = 64%, Silt/Clay = 0%,
	1.8	M.C. = 1.6%) END OF TESTPIT – REFUSAL ON PERMAFROST

Testpit	Depth (m)	Description
TP-41		Borrow Area 1 (east portion)
	0.0	SAND AND GRAVEL – some silt, some cobbles, trace clay, occasional boulders, well graded, subangular to subrounded, damp, brown
		(Sample at 0.0 – 0.3, Gravel = 36%, Sand = 47%, Silt/Clay = 17%, M.C. = 7.7%)
	0.3	END OF TESTPIT
		Boulders in area up to 1.2 m dia., approximately 30% oversize
TP-42		Borrow Area 1 (south portion)
	0.0	SAND AND GRAVEL – some silt, some cobbles, trace clay, occasional boulders, fine to medium grained sand, subangular to subrounded, damp,
	0.4	brown
		END OF TESTPIT – REFUSAL ON COBBLE
		Boulders in area up to 1.5 m dia., approximately 30% oversize
TP-43		Borrow Area 1 (southwest portion)
	0.0	SAND AND GRAVEL – some silt, some cobbles, trace clay, occasional boulders, fine to medium grained sand, subangular to subrounded, damp,
	0.6	brown
		(Sample at 0.2 – 0.6, M.C. = 7.6%)
		END OF TESTPIT
		Boulders in area up to 1.5 m dia., approximately 20% oversize
TP-44		Borrow Area 1 (west portion)
	0.0	SAND AND GRAVEL – silty, some cobbles, trace clay, occasional
	0.1	boulders, fine to medium grained sand, subangular to subrounded, damp, brown
		(Sample at 0.0 – 0.6)
	0.4	END OF TESTPIT – REFUSAL ON COBBLE
		Boulders in area up to 1.0 m dia., approximately 30% oversize
	1.2	
TP-45		Upper Station Road (upslope of south side)
	0.0	GRAVEL and SAND –silty, some cobble, some boulders, well graded, subangular to subrounded, damp to wet
	0.3	END OF TESTPIT
		Boulders up to 1.5 m dia.
TP-46		Upper Station Road (upslope of south side)
	0.0	SILT – sandy, gravelly, some clay, some cobble, some boulders, well graded, subangular to subrounded, low plasticity, wet, dark grey/brown
	0.3	END OF TESTPIT
		Boulders up to 1.5 m dia.

Testpit	Depth (m)	Description
TP-47		Upper Station Road (upslope of south side)
	0.0	GRAVEL and SAND –some silt, some cobble, some boulders, well graded, subangular to subrounded, wet
	0.3	END OF TESTPIT Boulders up to 2.5 m dia.
TP-48		Upper Station Road (upslope of south side)
	0.0	GRAVEL and SAND –some silt, some cobble, some boulders, well graded, subangular to subrounded, damp
	0.3	END OF TESTPIT Boulders up to 1.5 m dia.

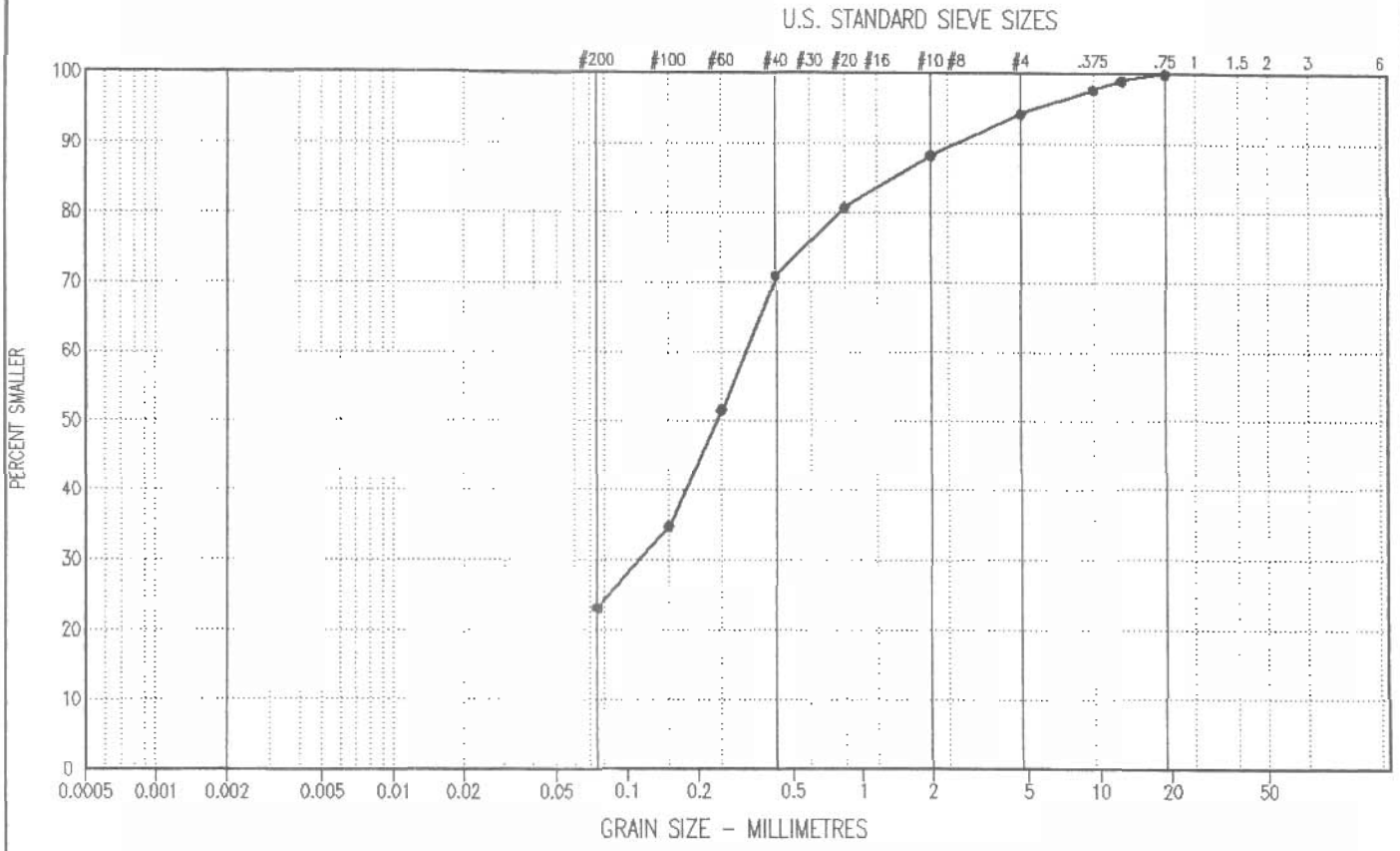
APPENDIX C

GEOTECHNICAL LABORATORY ANALYSIS RESULTS

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION CLAY %	SILT %	SAND %	GRAVEL %	Cu	Cc	U.S.C
●——●	TP-05	0.50 – 0.60	--- 23 ---		71	6	–	–	

Note:
Trace cobbles in testpit.
Cobbles not included in sample.

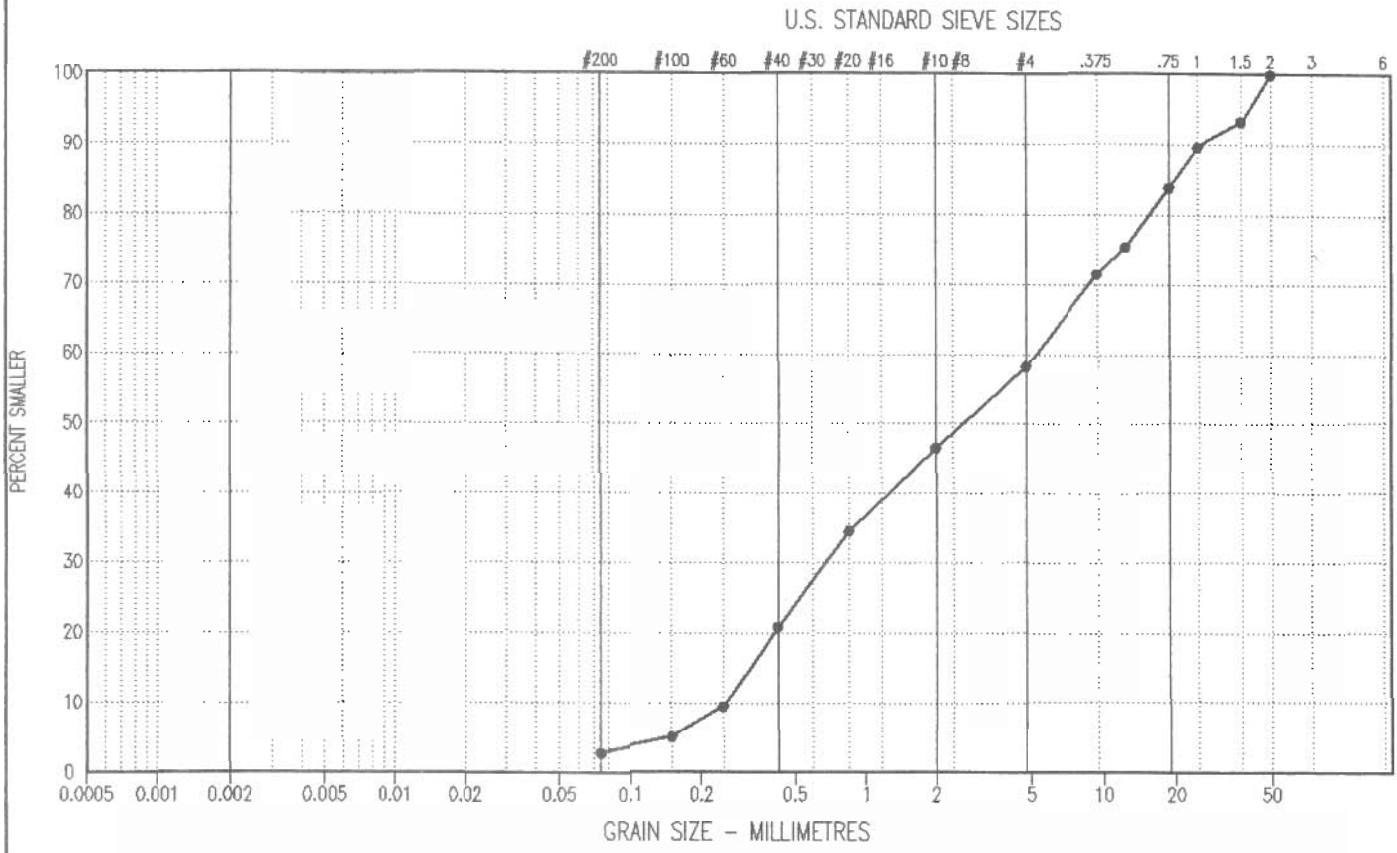
Project: 0101-1100065.001 Date Tested: 04/09/21 BY: ZK

Tested in accordance with ASTM D422 unless otherwise noted.

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●——●	TP-22	0.80 – 1.00	---	3 ---	55	42	20.8	0.4	SP

Note:
Some cobbles in testpit.
Cobbles not included in sample.

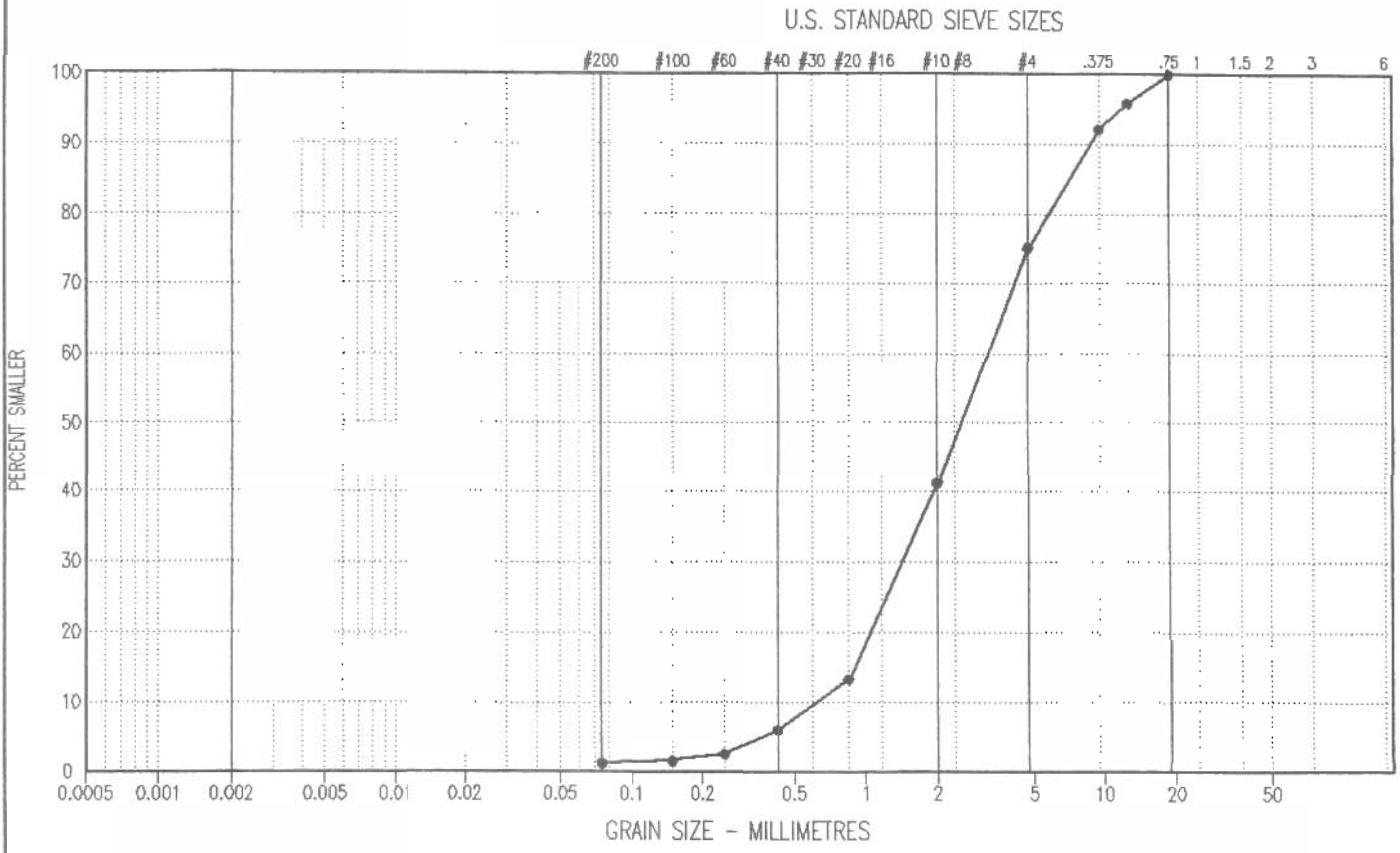
Project: 0101-1100065.001 Date Tested: 04/09/16 BY: ZK

Tested in accordance with ASTM D422 unless otherwise noted.

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●——●	TP-15	0.60 – 0.70	---	1 ---	74	25	5.3	1.0	SP

Note:
Trace cobbles in testpit.
Cobbles not included in sample.

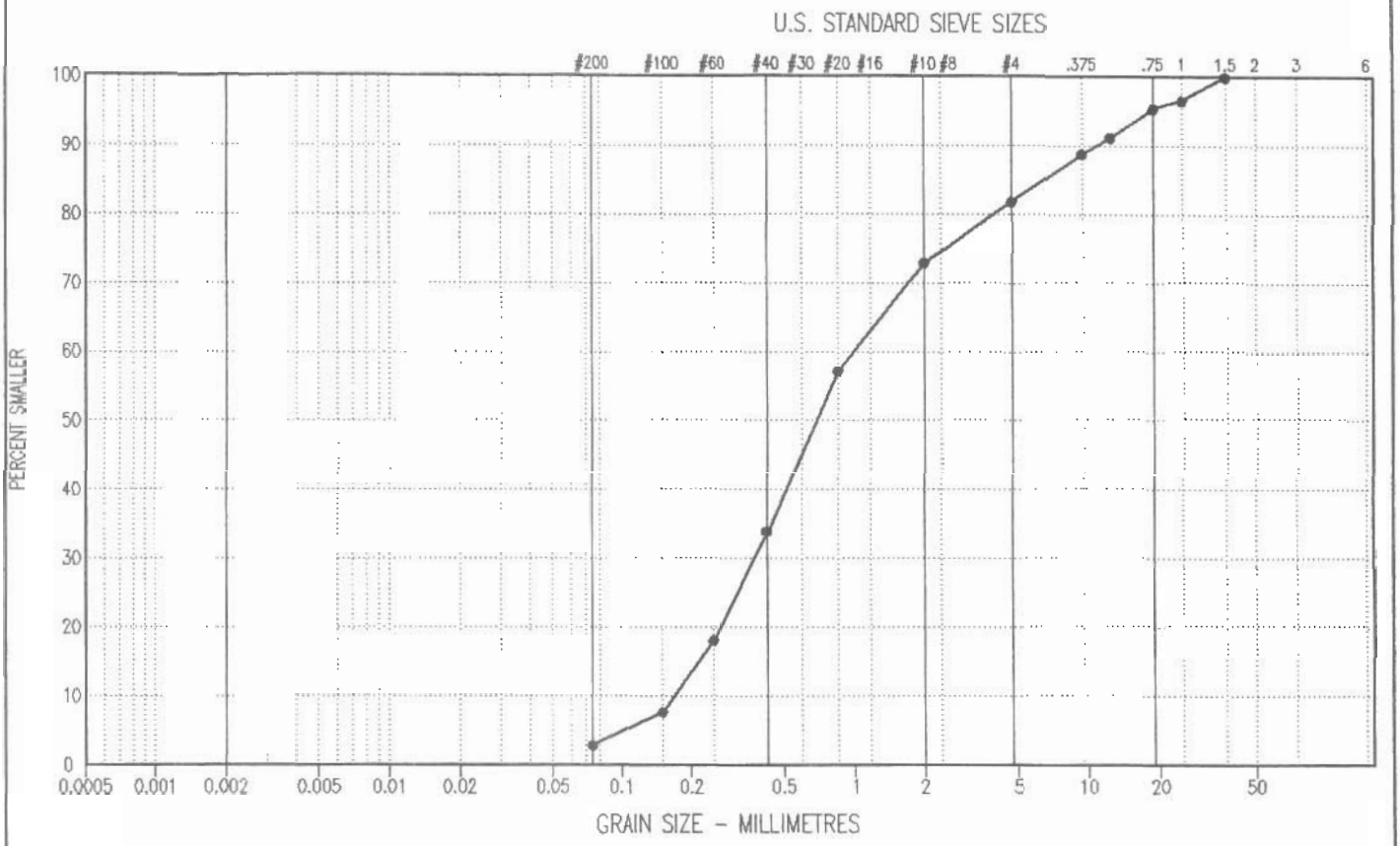
Project: 0101-1100065.001 Date Tested: 04/09/21 BY: ZK

Tested in accordance with ASTM D422 unless otherwise noted.

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION				Cu	Cc	U.S.C
			CLAY %	SILT %	SAND %	GRAVEL %			
●	TP-26	0.30 – 0.70	---	3 ---	78	19	6.1	0.8	SP

Note:
Trace cobbles in testpit.
Cobbles not included in sample.

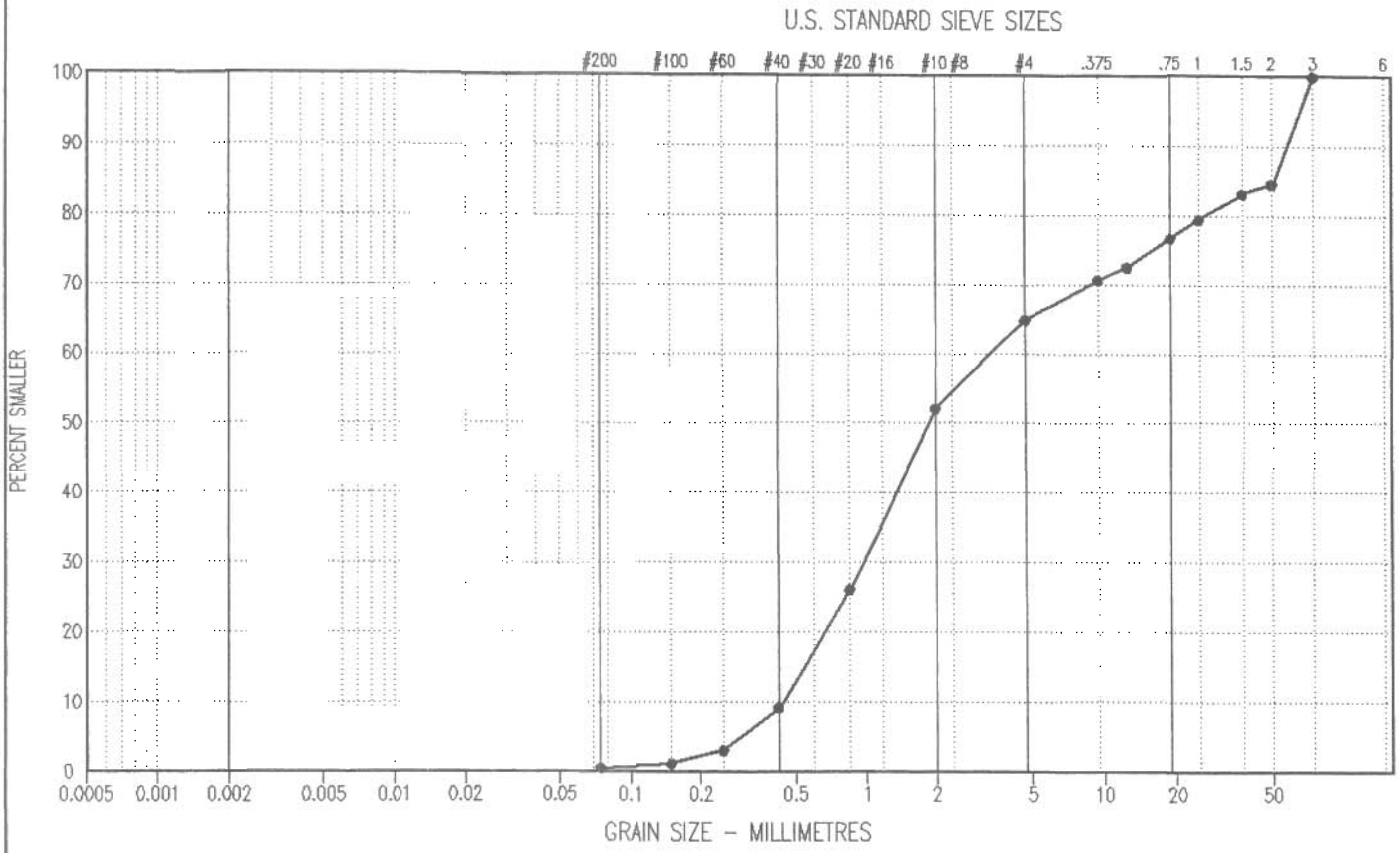
Project: 0101-1100065.001 Date Tested: 04/09/16 BY: ZK

Tested in accordance with ASTM D422 unless otherwise noted.

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION CLAY %	SILT %	SAND %	GRAVEL %	Cu	Cc	U.S.C
●——●	TP-40	0.30 – 1.00	---	0 ---	64	36	8.3	0.6	SP

Note:
Some cobbles in testpit.
Cobbles not included in sample.

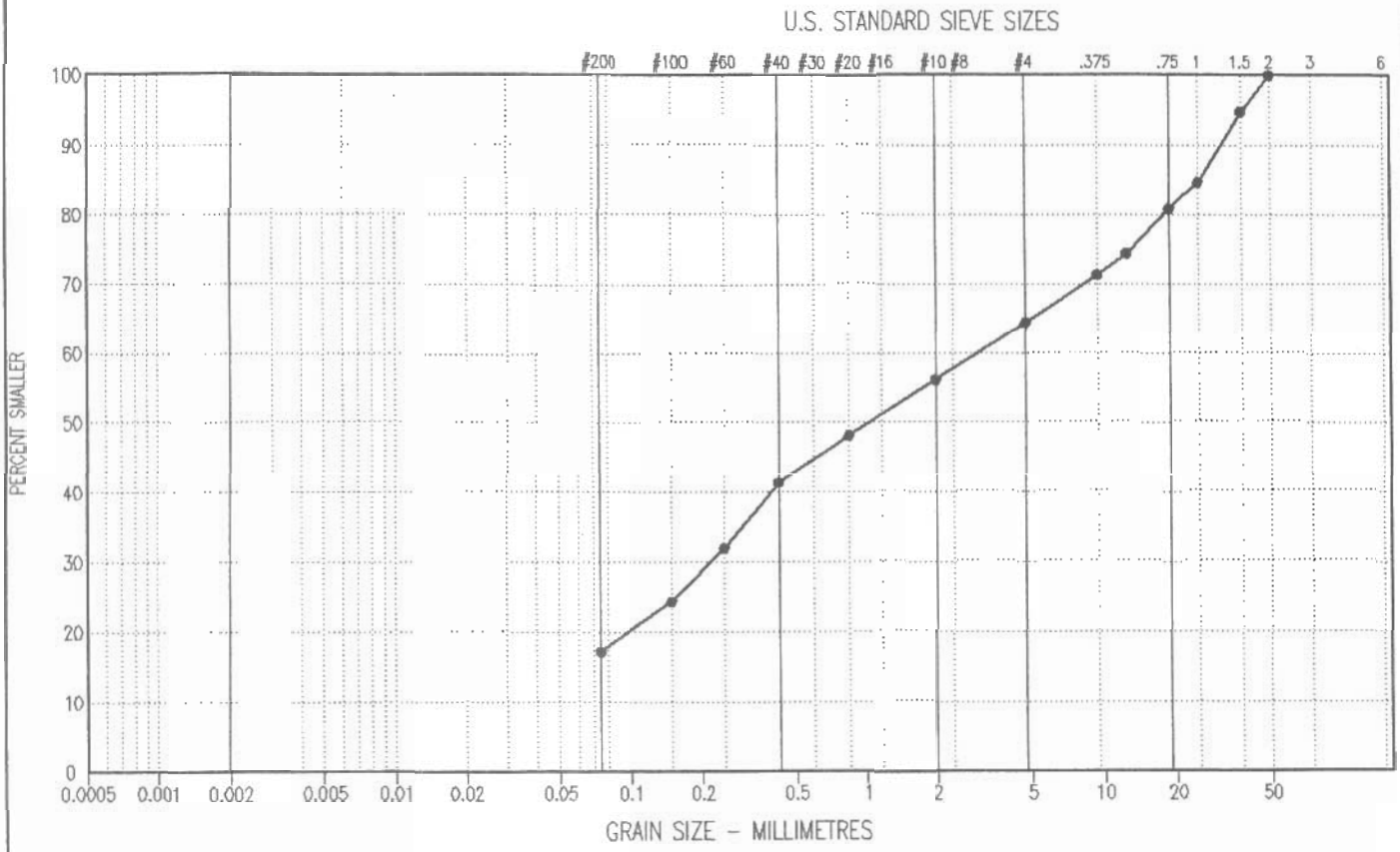
Project: 0101-1100065.001 Date Tested: 04/09/16 BY: ZK

Tested in accordance with ASTM D422 unless otherwise noted.

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION CLAY %	SILT %	SAND %	GRAVEL %	Cu	Cc	U.S.C
●——●	TP– 41	0.00 – 0.30	---	17	---	47	36	–	–	

Note:
Some cobbles in testpit.
Cobbles not included in sample.

Project: 0101–1100065.001 Date Tested: 04/09/16 BY: ZK

Tested in accordance with ASTM D422 unless otherwise noted.

APPENDIX D

GEOTECHNICAL REPORT
GENERAL CONDITIONS

This report incorporates and is subject to these "General Conditions."

1. USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of EBA's client. EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA's client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

2. NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

3. LOGS OF TEST HOLES

The test hole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

4. STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

5. SURFACE WATER AND GROUNDWATER CONDITIONS

Surface and groundwater conditions mentioned in this report are those observed at the times recorded in the report. These conditions vary with geological detail between observation sites; annual, seasonal and special meteorologic conditions; and with development activity. Interpretation of water conditions from observations and records is judgmental and constitutes an evaluation of circumstances as influenced by geology, meteorology and development activity. Deviations from these observations may occur during the course of development activities.

6. PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

7. SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

8. INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

9. OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

10. DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

11. BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

12. SAMPLES

EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the client's expense upon written request, otherwise samples will be discarded.

13. STANDARD OF CARE

Services performed by EBA for this report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions in the jurisdiction in which the services are provided. Engineering judgement has been applied in developing the conclusions and/or recommendations provided in this report. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this report.

14. ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

15. ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA's instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by EBA shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancies, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by EBA shall be deemed to be the overall original for the Project.

The Client agrees that both electronic file and hard copy versions of EBA's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. The Client warrants that EBA's instruments of professional service will be used only and exactly as submitted by EBA.

The Client recognizes and agrees that electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.