

APPENDIX 1 – Abbreviations for Soil Morphology

Distinctness of Boundary:

Abrupt = A Clear = C Gradual = G Diffuse = D

Textural Classes:

Coarse sand	= COS	Sandy clay loam	= SCL
Sand	= S	Loam	= L
Fine sand	= FS	Clay loam	= CL
Very fine sand	= VFS	Silt	= SI
Loamy coarse sand	= LCOS	Silt loam	= SIL
Loamy sand	= LS	Silty clay loam	= SICL
Loamy fine sand	= LFS	Silty clay	= SIC
Loamy very fine sand	= LVFS	Sandy clay	= SC
Coarse sandy loam	= COSL	Clay	= C
Sandy loam	= SL		
Fine sandy loam	= FSL		
Very fine sandy loam	= VFSL		

Coarse Fragments:

Gravelly	= GR	Channery	= CH
Very gravelly	= VGR	Very channery	= VCH
Extremely gravelly	= EGR	Extremely channery	= ECH
Cobbly	= CB	Flaggy	= FL
Very cobbly	= VCB	Very flaggy	= VFL
Extremely cobbly	= ECB	Extremely flaggy	= EFL

Structure, Grade:

Structureless = 0 Weak = 1 Moderate = 2 Strong = 3

Structure, Shape:

Granular	= GR	Angular blocky	= ABK
Platy	= PL	Subangular blocky	= SBK
Prismatic	= PR	Single grain	= SGR
Columnar	= COL	Massive	= MA
Wedge	= WEG		

Consistence:

Loose	= L	Firm	= FI
Very Friable	= VFR	Very Firm	= VFI
Friable	= FR	Extremely Firm	= EFI

APPENDIX 2 - Rating Guide for Soil Interpretations

Suitability as a Roadfill Material

Reason #	Property	Good	Fair	Poor
1	Depth to bedrock or cemented pan	> 150 cm	100 to 150 cm	< 100 cm
2	Shrink swell	< 8 cm clay	8 to 16 cm clay	> 16 cm clay
3	Strength (avg. 25 to 100 cm)	S, LS, SL	L, SCL	all others
4	Ponding	no	-----	yes
5	Depth to high water table	> 90 cm	30 to 90 cm	< 30 cm
6	Slope	< 15%	15 to 25%	> 25%
7	Flooding (floodplain landform)	none	-----	any
8	Frost action	S, LS	all others	SI, SIL, SICL
9	% > 8 cm stones, 0 to 40 cm	< 25%	25 to 50%	> 50%

Onsite Wastewater Treatment

Reason #	Property	Slight	Moderate	Severe
1	Flooding (floodplain landform)	none	-----	any
2	Depth to bedrock or cemented pan	> 150 cm	100 to 150 cm	< 100 cm
3	Ponding	no	-----	yes
4	Depth to high water table	> 150 cm	120 to 150 cm	< 120 cm
5	Onsite wastewater loading rate at 75 cm (Appendix 3)	0.52-0.84	-----	< 0.52 or > 0.84, or NR
6	Slope	< 8%	8 to 15%	> 15%
7	% > 8 cm stones, 0 to 40 cm	< 25%	25 to 50%	> 50%

Houses with Basements

Reason #	Property	Slight	Moderate	Severe
1	Flooding (floodplain landform)	none	-----	any
2	Ponding (closed depression)	no	-----	yes
3	Depth to high water table	> 150 cm	75 to 150 cm	< 75 cm
4	Depth to bedrock or cemented pan	>150 cm	100 to 150 cm	< 100 cm
5	Slope	< 8%	8 to 15%	> 15%
6	Shrink swell	< 8 cm clay	8 to 16 cm clay	> 16 cm clay
7	% > 8 cm stones, 0 to 100 cm	< 25%	25 to 50%	> 50%

APPENDIX 3 –Key for Determining Onsite Wastewater Subsurface Loading Rates

Structure Shape/Grade	SGR, PL, RCF	GR, ABK, SBK, PR				MA		
		Weak (1)		Mod (2), Strong (3)				
Moist Consistence	Any	VFR, FR	FI, VFI, EFI	VFR, FR	FI, VFI, EFI	VFR	FR	FI, VFI, EFI
Texture								
Dense till Fragipan Cr or R horizon > 35% CF	NR	NR	NR	NR	NR	NR	NR	NR
S, COS, VCOS, LCOS, LS	1	1	NR	NR	NR	1	NR	NR
FS, LFS, COSL	0.84	0.91	NR	NR	NR	0.91	0.84	NR
SL,FSL	0.75	0.75	NR	0.84	NR	0.84	0.75	0.69
L, SIL, VFSL, SCL, SI, VFS, LVFS	0.62	0.69	0.62	0.75	0.52	0.62	0.52	0.45
SICL (≤ 35% clay) CL (≤ 35% clay)	0.52	0.52	0.45	0.62	0.52	0.62	0.52	0.45
SICL (> 35% clay) CL (> 35% clay)	NR	NR	0.4	0.45	0.4	NR	0.2	NR
SC, SIC, C	NR	NR	NR	NR	0.2	NR	NR	NR

*NR = not recommended or not applicable

NACTA SOILS CONTEST
4-Year Division
SITE CARD

SITE NO. _____

Describe _____ **horizons to a depth of** _____ **cm.**

Blue marker is in the third horizon at _____ **cm.**

Horizon	pH	% Base Sat.	% Organic C	% CaCO₃
1.				
2.				
3.				
4.				
5.				
6.				