

EXHIBITS

- Exhibit 1. Unified Soil Classification System
- Exhibit 2. Boring Log Legend

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPHIC	LETTER		
Coarse grained soils	Gravel and gravelly soils	Clean gravels (little or no fines)		GW	Well-graded gravels, Gravel, Sand mixtures, Little or no fines	
				GP	Poorly-graded gravels, Gravel-sand mixtures, Little or no fines	
		Gravel with fines (appreciable amount of fines)		GM	Silty gravels, Gravel-sand-silt mixtures	
				GC	Clayey gravels, Gravel-sand-clay mixtures	
	More than 50% of material is <u>larger</u> than No. 200 sieve size	Sand and sandy soils	Clean sands (little or no fines)		SW	Well-graded sands, Gravelly sands, Little or no fines
					SP	Poorly-graded sands, Gravelly sands, Little or no fines
		More than 50% of coarse fraction <u>passing</u> on No. 4 sieve	Sands with fines (appreciable amount of fines)		SM	Silty sands, Sand-silt mixtures
					SC	Clayey sands, Sand-clay mixtures
Fine grained soils	Silts and clays	Liquid limit <u>less</u> than 50		ML	Inorganic silts and very fine sands, Rock flour, Silty or clayey fine sands or clayey silts with slight plasticity	
				CL	Inorganic clays of low to medium plasticity, Gravelly clays, Sandy clays, Silty clays, Lean clays	
				OL	Organic silts and organic silty clays of low plasticity	
	More than 50% of material is <u>smaller</u> than No. 200 sieve size	Silts and clays	Liquid limit <u>greater</u> than 50		MH	Inorganic silts, Micaceous or diatomaceous fine sand or silty soils
					CH	Inorganic clays of high plasticity, Fat clays
					OH	Organic clays of medium to high plasticity, Organic silts
Highly organic soils				PT	Peat, Humus, Swamp soils with high organic contents	

Note: Dual symbols are used to indicate borderline soil classifications

Boring Legend

Sample Type



Split Spoon Sample



Split Spoon No Sample Recovered



Disturbed Sample



Standar Penetration Test Sample



Standar Penetration Test No Sample Recovered



Core



Shelby Tube Sample

Field Tests

pen = Pocket Penetrometer

tor = Torvane

Lab Tests

LL = Liquid Limit (ASTM D-4318)

PI = Plasticity Index (ASTM D-4318)

CBR = California Bearing Ratio (ASTM D-1883)

CBR Exp. = CBR Expansion (ASTM D-1883)

MC = Moisture Content (ASTM D-2216)

DD = Dry Density / Dry Unit Weight (ASTM D-2937)

Gradation (Sieve Analysis of Fine and Coarse Aggregates) (ASTM C136)

SG = Specific Gravity (ASTM D-854)

Consol = Consolidation (ASTM D-2435)

Direct Shear (ASTM D-3080)

UC = Unconfined Compression (ASTM D-2166)

TxCU = Consolidated Undrained Triaxial Compression (ASTM D-4767)