

UNIFIED SOILS CLASSIFICATION SHEET

COARSE GRAINED SOILS						
More than 1/2 of the material (by weight) is individual grains visible to the naked eye.						
GRAVELLY SOILS						
More than 1/2 of coarse fraction is larger than 1/4 inch.						
CLEAN GRAVELS Will not leave a stain on a wet palm	Substantial amounts of all grain particle sizes					GW
	Predominantly one size or a range of sizes with some intermediate sizes missing.					GP
DIRTY GRAVELS Will leave a stain on a wet palm	Non-plastic fines					GM
	Plastic fines					GC
SANDY SOILS						
More than 1/2 of coarse fraction is smaller than 1/4 inch.						
CLEAN SANDS Will not leave a stain on a wet palm	Wide range in grain size and substantial amounts of all grain particle sizes.					SW
	Predominantly one size or a range of sizes with some intermediate sizes missing.					SP
DIRTY SANDS Will leave a stain on a wet palm	Non-plastic fines					SM
	Plastic fines					SC
FINE GRAINED SOILS						
More than 1/2 of the material (by weight) is individual grains not visible to the naked eye.						
SHINE--Rub fingernail or knife on moist soil, high plasticity--shiny surface.						
RIBBON--Squeeze soil at plastic limit moisture between thumb and finger, pull apart.						
LIQUID LIMIT--Add water to soil clod, break open, slow water entry--high Liquid Limit.						
DRY CRUSHING STRENGTH--Crush an air-dried clod with fingers.						
DILATENCY--Place moist soil on hand, shake horizontally, observe water on surface.						
TOUGHNESS--Roll 1/8" moist soil threads, pull apart, clays break circumferentially.						
STICKINESS--Let wet soil dry on hand, ML and MH brush off. CH needs water.						
RIBBON	LIQUID LIMIT	DRY CRUSHING STRENGTH	DILATENCY REACTION	TOUGHNESS	STICKINESS	TYPE
None	50 fast	None to slight	Rapid	Low	None	ML
Weak	50 fast	Medium to high	None to very slow	Medium to high	Medium	CL
Strong	50 slow	Slight to medium	Slow to none	Medium	Low	MH
Very Strong	50 slow	High to very high	None	High	Very High	CH
HIGH ORGANIC SOILS--Identify by color, odor, spongy feel, fibrous texture } OL, OH, PT						