

## Cone Technologies and Their Applications

		CONES				OTHER		
		CPT	CPTU	SEISMIC CONE	CONE PRESSURE METER (FDP)	RESISTIVITY PROBE	PUSH IN VANE	PLATE LOAD
Soil Parameters	Soil Type	High	High/Moderate	High/Moderate	Moderate	Moderate/Low	Low	None
	Profile	High	High/Moderate	High/Moderate	Moderate	Moderate/Low	Low	None
	$u_2$	None	High/Moderate	High/Moderate	None	None	None	None
	$\phi'$	Low	High/Moderate	High/Moderate	Moderate	Moderate/Low	None	None
	$s_u$	High	High/Moderate	High/Moderate	Moderate	Moderate/Low	High	High
	$m_v$	Low	High/Moderate	High/Moderate	Moderate	Moderate/Low	None	High
	$c_v$	None	High/Moderate	High/Moderate	Moderate	Moderate/Low	None	High
	$k$	None	High/Moderate	High/Moderate	None	None	None	High
	$G$	High	High/Moderate	High/Moderate	High	High	None	High
	$\sigma_h$	Moderate/Low	Moderate/Low	High/Moderate	Moderate	Moderate/Low	None	High
	OCR	High	High/Moderate	High/Moderate	Moderate	Moderate/Low	Moderate/Low	High
Ground Type	Hard Rock	None	None	None	None	None	None	High
	Soft Rock	Low	High/Moderate	High/Moderate	Moderate	Moderate/Low	None	High
	Gravel	Low	None	None	None	None	None	High
	Sand	High	High/Moderate	High/Moderate	Moderate	High	None	High
	Silt	High	High/Moderate	High/Moderate	Moderate	High	None	High
	Clay	High	High/Moderate	High/Moderate	Moderate	High	High	High
	Peat	High	High/Moderate	High/Moderate	Moderate	High	High	High

Applicability:	High	High/Moderate	Moderate	Moderate/Low	Low	None
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$\phi'$  = Will depend on soil type

Soil parameter definitions:

$u$  = in situ static pore pressure

$k$  = coefficient of permeability

$\phi'$  = effective internal friction angle  $s_u$  = undrained shear strength

$G$  = shear modulus at small strains

$\sigma_h$  = horizontal stress

$m_v$  = constrained modulus

OCR = overconsolidation ratio

$c_v$  = coefficient of consolidation

