

### Bridge Division Request for Soil Properties

Job No. \_\_\_\_\_  
 County: \_\_\_\_\_  
 Bridge No. \_\_\_\_\_  
 Route: \_\_\_\_\_

$S_u$  = For clay, the undrained shear strength, ksf. For rock, the shear capacity, ksf.  
 $\gamma$  = Weight per unit volume, pcf (effective unit weight below water table, unit weight above water table).

Bent No's. (Mark all that may apply)	Substructure Type	N, Standard Penetration Test, Blow counts per foot	$\phi$ , Internal friction angle (degrees)	$S_u$ or c, Undrained Shear Strength (ksf)	$\gamma$ , Unit weight of soil (pcf)	RQD (%), Rock Quality Designation	Allowable Friction (ksf) (LFD)	Allowable Bearing (ksf) (LFD)	Geotechnical Friction Resistance (w/o Resistance Factor) (LRFD)	Geotechnical Bearing Resistance (w/o Resistance Factor) (LRFD)	Recommend Geotechnical Resistance Factors (LRFD)	Liquefaction	Water Elev./ Groundwater conditions (ft)	AASHTO soil profile type	Permanent Casing Required	Downdrag	Software input **	Leveling Pad Elevation	Global Stability Analysis	Scour Analysis input (D50, D90) (Stream crossings only)
	Piles at End Bents	X	X	X	X				X	X	X		X			X	X			
	Pile Footings	X	X	X	X				X	X	X		X			X	X			X
	Spread Footings			X	X	X				X	X		X							X
	Drilled Shafts	X	X	X	X	X			X	X	X		X		X	X	X			X
	CIP Retaining Wall	X	X		X		X	X											X	
	MSE Wall	X	X		X		X	X											X	X
	Box Culvert	X	X		X	X														
	Seismic											X		X						

** Software Input (L-pile or Driven)											General Comments:	
Choices of Soil Classification	Unit weight, $\gamma$ , pcf	Effective Unit weight, $\gamma$ , pcf	Undrained Shear Strength, $S_u$ or c, ksf	SPT $N_{60}$ , blows/ft	Internal Friction Angle, $\phi$ , °	Soil Strain Parameter, E50 or $k_{rm}$	Soil Modulus Parameter, k, pci	Rock Mass Modulus, $E_r$ , psi	Rock Quality Designation, RQD, %	Unconfined Comp. Strength, $Q_u$ , ksf	1.	2.
Soft Clay	X	X	X	X		X						
Stiff Clay	X	X	X	X		X	X					
Sand	X	X		X	X		X					
Silt	X	X		X	X	X	X					
Weak Rock	X	X				X		X	X	X		
Strong Rock	X	X							X	X		