1 Undrained Shear Strength

$$s_u = \sigma'_v S(OCR)^m, \text{ where } S = (s_u/\sigma'_v)_{NC}$$

2 Overconsolidation Ratio, OCR

$$OCR = \frac{\sigma'_p}{\sigma'_{vo}} = \left[\frac{s_u/\sigma'_{vo}}{S}\right]^{1/m}$$

3 Maximum Past Pressure, σ'_p, from Field Vane Shear Tests

$$\sigma'_p = \sigma'_{vo}\left[\mu\frac{(s_u)_{FV}/\sigma'_{vo}}{S_{DSS}}\right]^{1/m}, \quad \text{where, } S_{DSS} = (s_u/\sigma'_{vc})_{NC} \text{ from Direct Simple Shear Tests}$$

μ = Field Shear Vane Correction Factor

FIG_32: SHANSEP Principles of Normalized Undrained Strength Behavior

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