$$q' = \frac{\sigma'_1 - \sigma'_3}{2}$$

Shear Stress, — Compression / Extension —

K_f-Line (Compression)

Δu

K_o-Line (Normally Consolidated)

A'

A

(−)

C'

O

TSP

(+)

B'

B

ESP

Δu

σ'_{vo}

$$p' = \frac{\sigma'_1 + \sigma'_3}{2}$$

K_f-Line (Extension)

Axial Strain, ε_a

A

C

O

B

← Extension — Compression →

Stress Path ID	Physical Condition	Stress Changes
O-A'	Excavation of Slurry Trench Compression - Loading	σ'_{vo}, σ_h, $\Delta\sigma_h = \sigma_{hA}$, σ_{hA}, σ'_{vo}
A'-B'	Trench Backfilled with Concrete	σ'_{vo}, σ_{hA}, $\Delta\sigma_h = \sigma_{hB}$, σ_{hB}, σ'_{vo}
B'-C'	Concrete Shrinkage + Inward Deflection of Wall	Reduction in Total Horizontal Stress

Excavation   **Backfill**

$-\Delta\sigma_h$ $+\Delta\sigma_h$

Slurry   Concrete
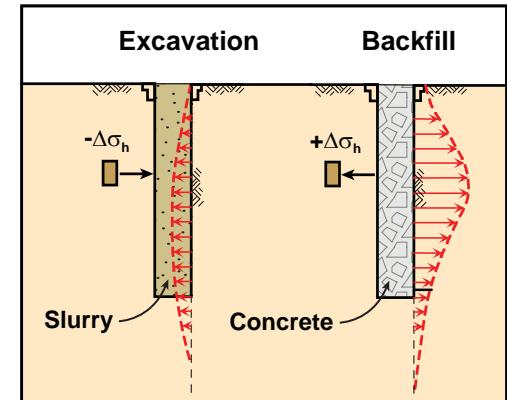
FIG_ 205: Stress Changes and Deformations During Slurry Wall Construction

W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\09 SLURRY WALL (192-205)\FIG_205