

Excavation Process

Elastic
zone
 $\varepsilon = \varepsilon^e$

Viscoplastic

zone
 $\varepsilon = \varepsilon^e + \varepsilon^{vp}$

Viscoplastic

zone
 $\varepsilon = \varepsilon^e + \varepsilon^{vp}$

Elasto-plastic-viscoplastic

zone
 $\varepsilon = \varepsilon^e + \varepsilon^p + \varepsilon^{vp}$

Elastic
zone
 $\varepsilon = \varepsilon^e$

Elastic
zone
 $\varepsilon = \varepsilon^e$

