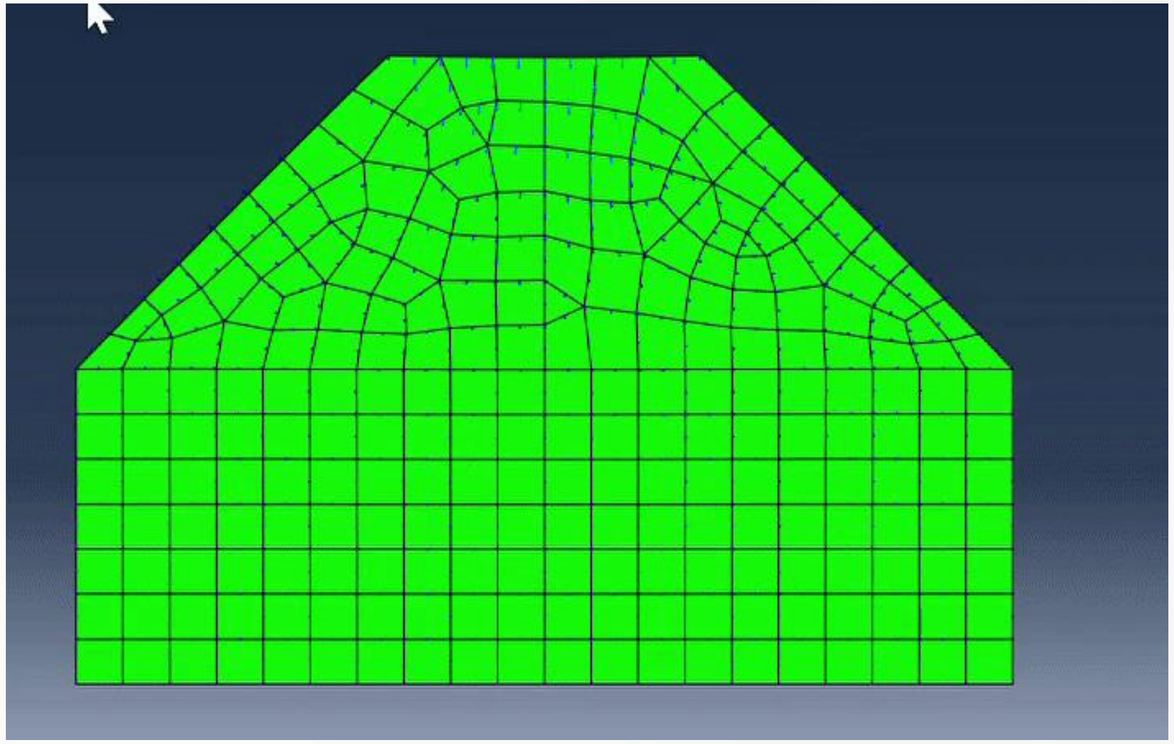
Procedure

1. Model Creation
2. Giving material Properties
3. Applying Boundary Conditions
4. Applying Load
5. Visualizing the deformations/settlement
6. Obtaining the graphs



Properties

Soaked condition

Ash Mix:
Mass Density = 1050 Kg/m3
CBR = 4.3
E = 3.614 MPa
Poisson's Ration = 0.3
Permeability = $8x10^{-7}$ m/s
Void Ratio = 7.47

Subgrade:
Mass Density = 1856 Kg/m3
CBR = 6
E = 5.043 MPa
Poisson's Ration = 0.3
Permeability = $1.5x10^{-8}$ m/s
Void Ratio = 0.5

Unsoaked condition

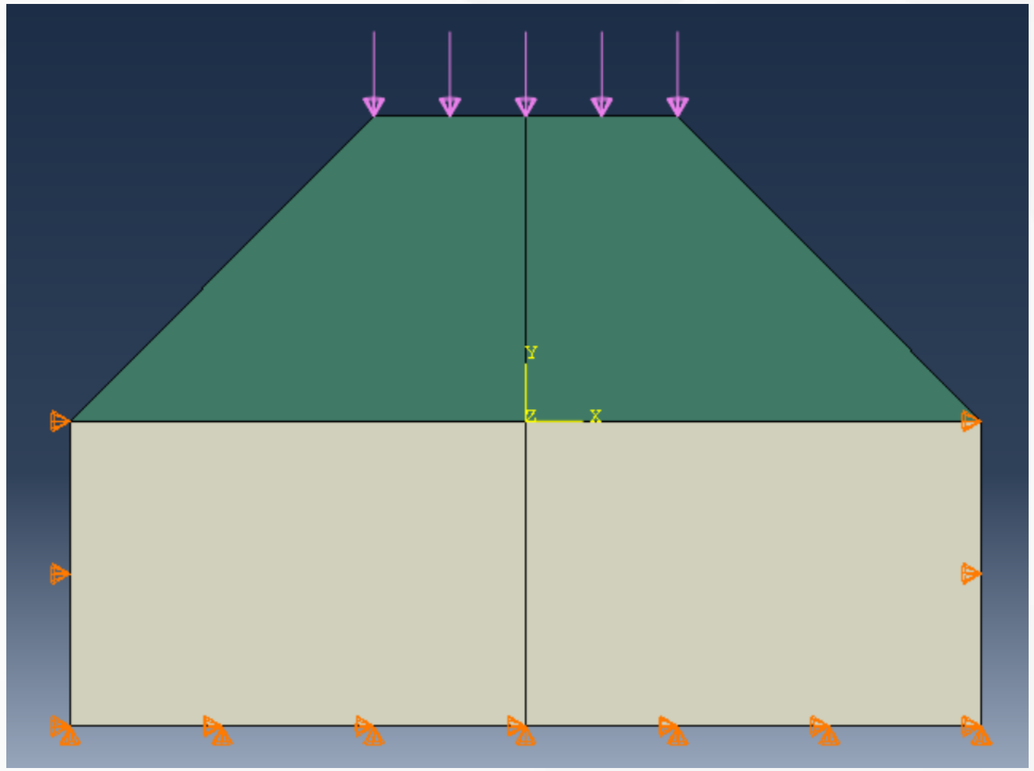
Ash Mix:
Mass Density = 1050 Kg/m3
CBR = 12
E = 10.086 MPa
Poisson's Ration = 0.3
Permeability = $8x10^{-7}$ m/s
Void Ratio = 7.47

Subgrade:
Mass Density = 1856 Kg/m3
CBR = 10
E = 8.405 MPa
Poisson's Ration = 0.3
Permeability = $1.5x10^{-8}$ m/s
Void Ratio = 0.5

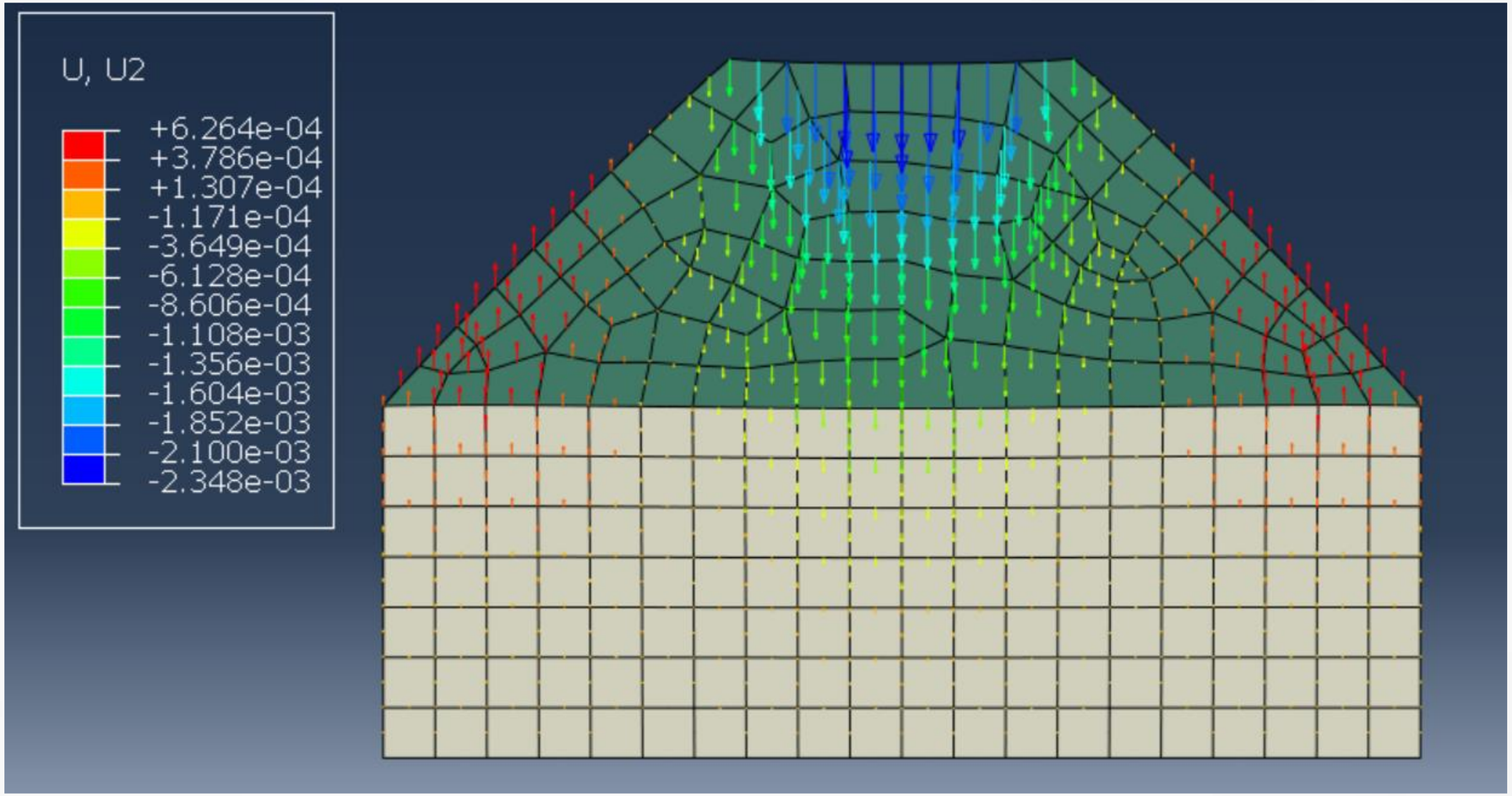
Boundary conditions and Load

Uniformly distributed Load is Provided on the top of embankment

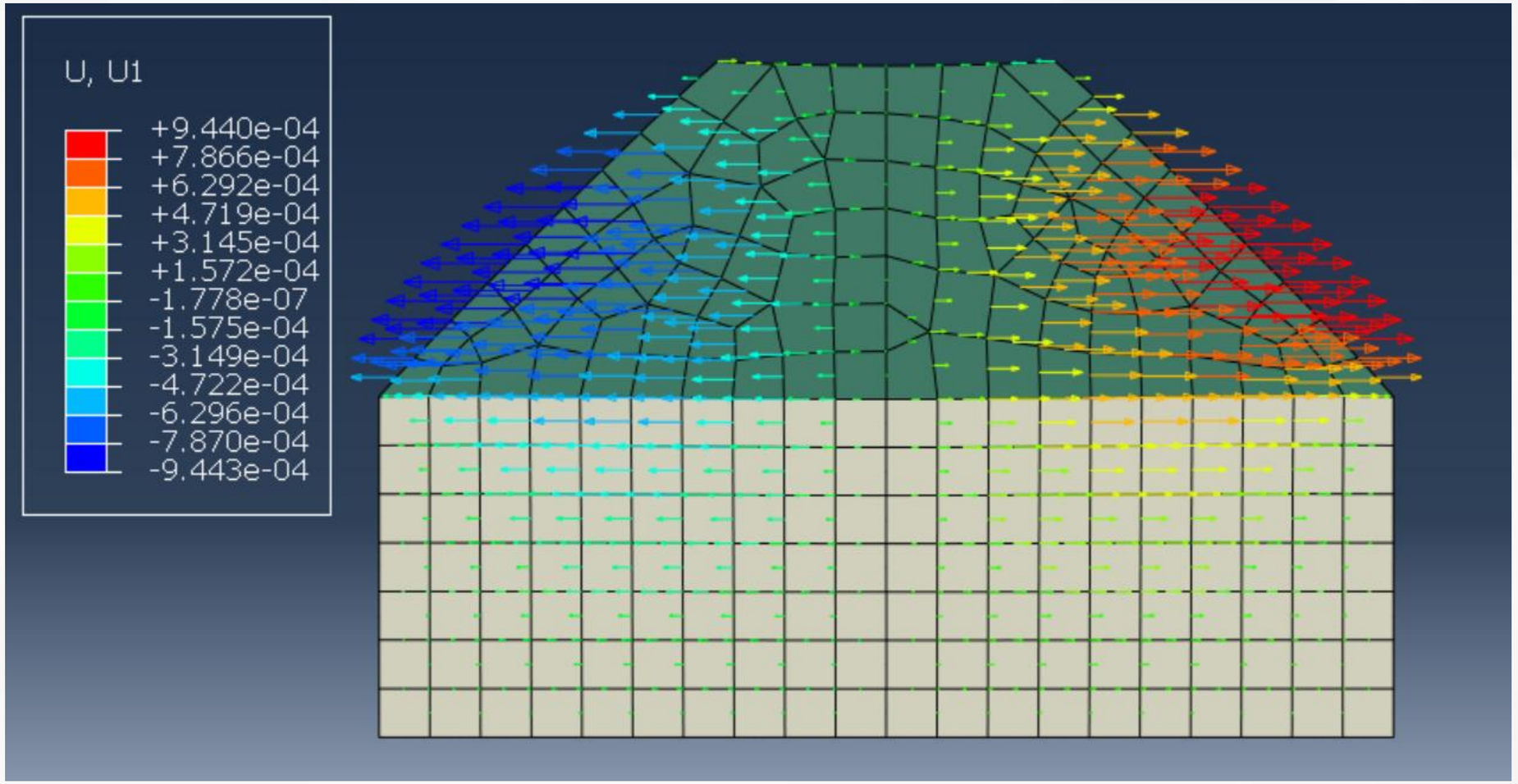
Boundary Conditions:
Base of the embankment is restricted in both x and Y directions
Sides of Embankments Are restricted in X direction



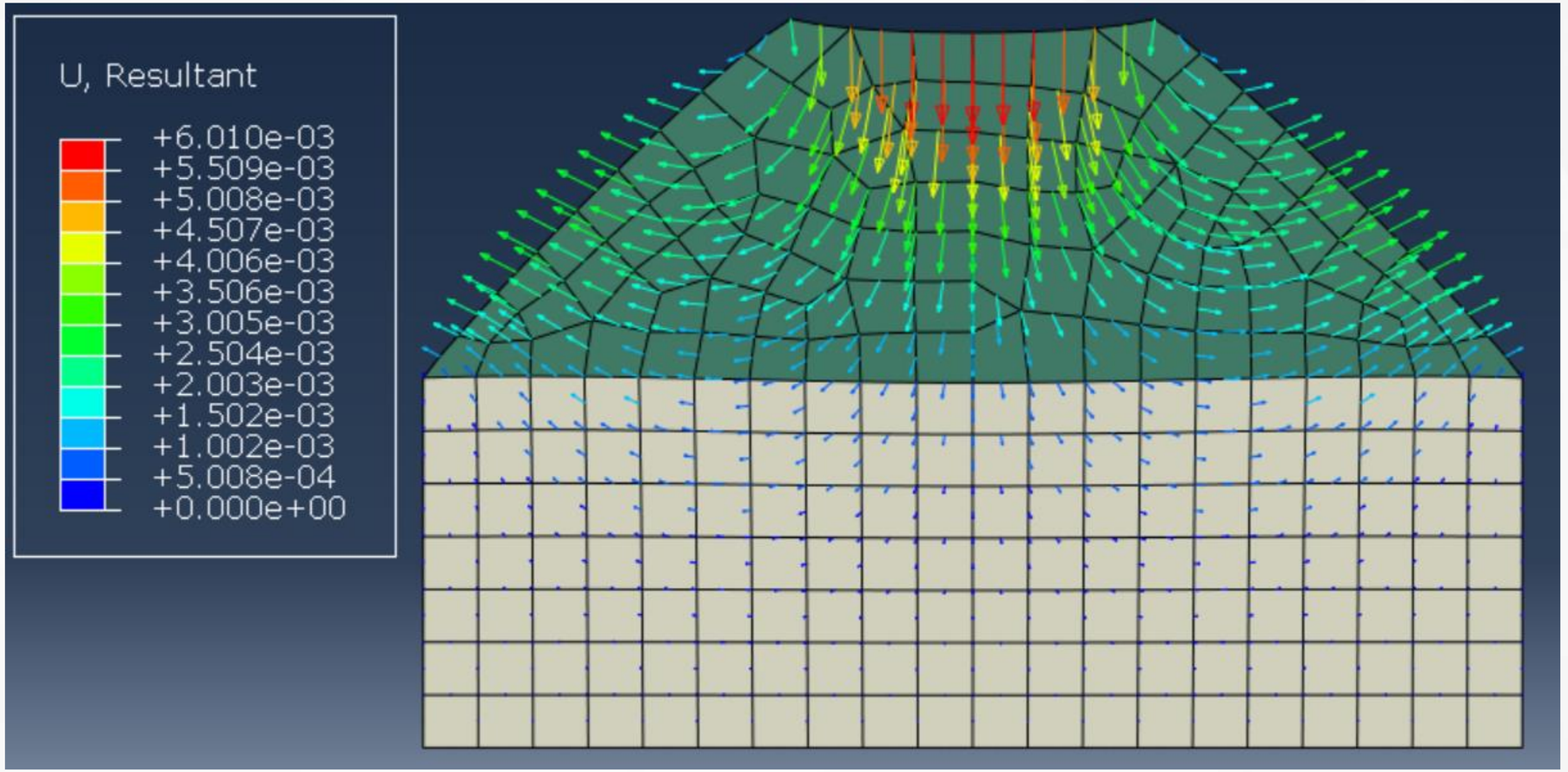
Visualizing Displacement of nodes (particle) in Vertical direction



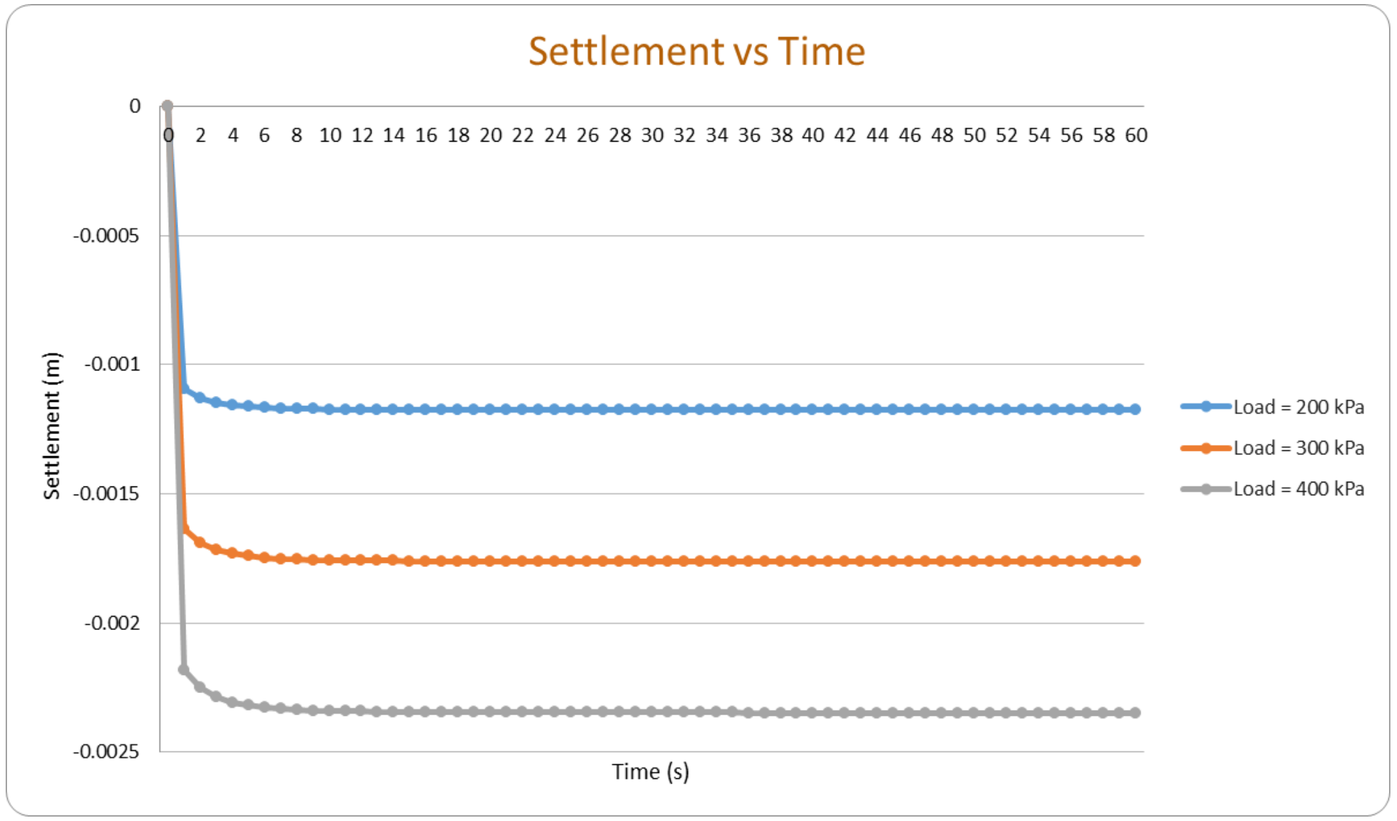
Visualizing Displacement of nodes (particle) in Horizontal direction

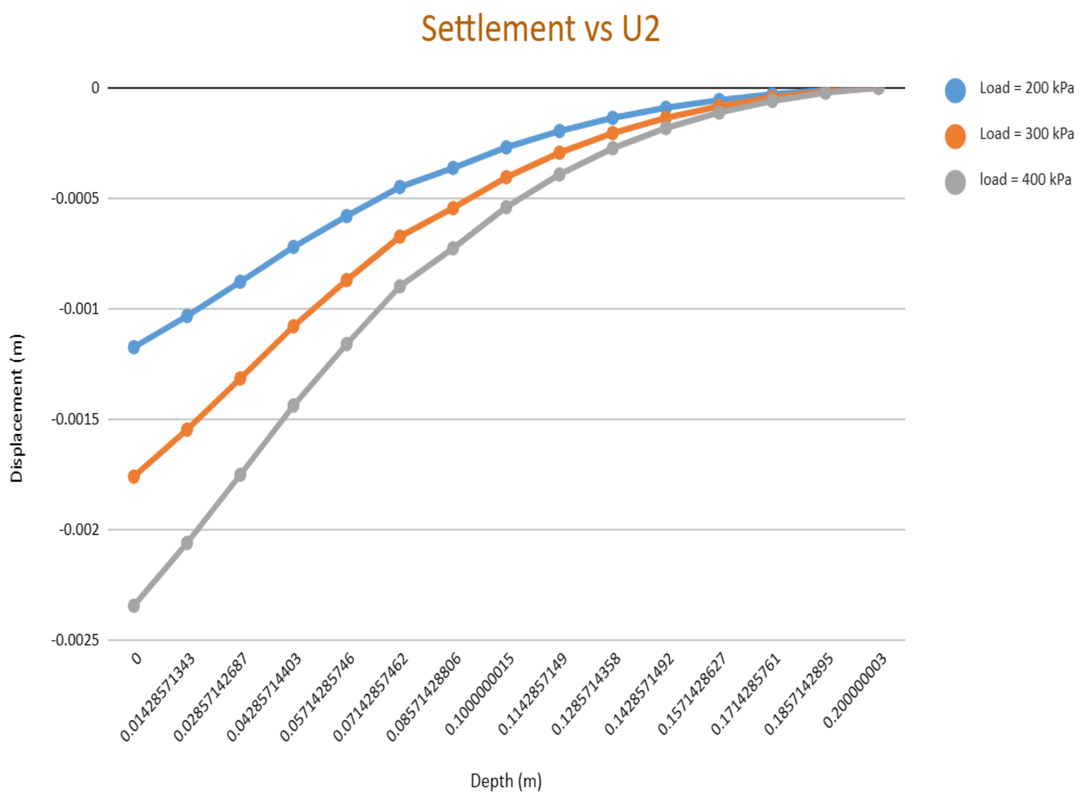


Visualizing Displacement of nodes (particle)

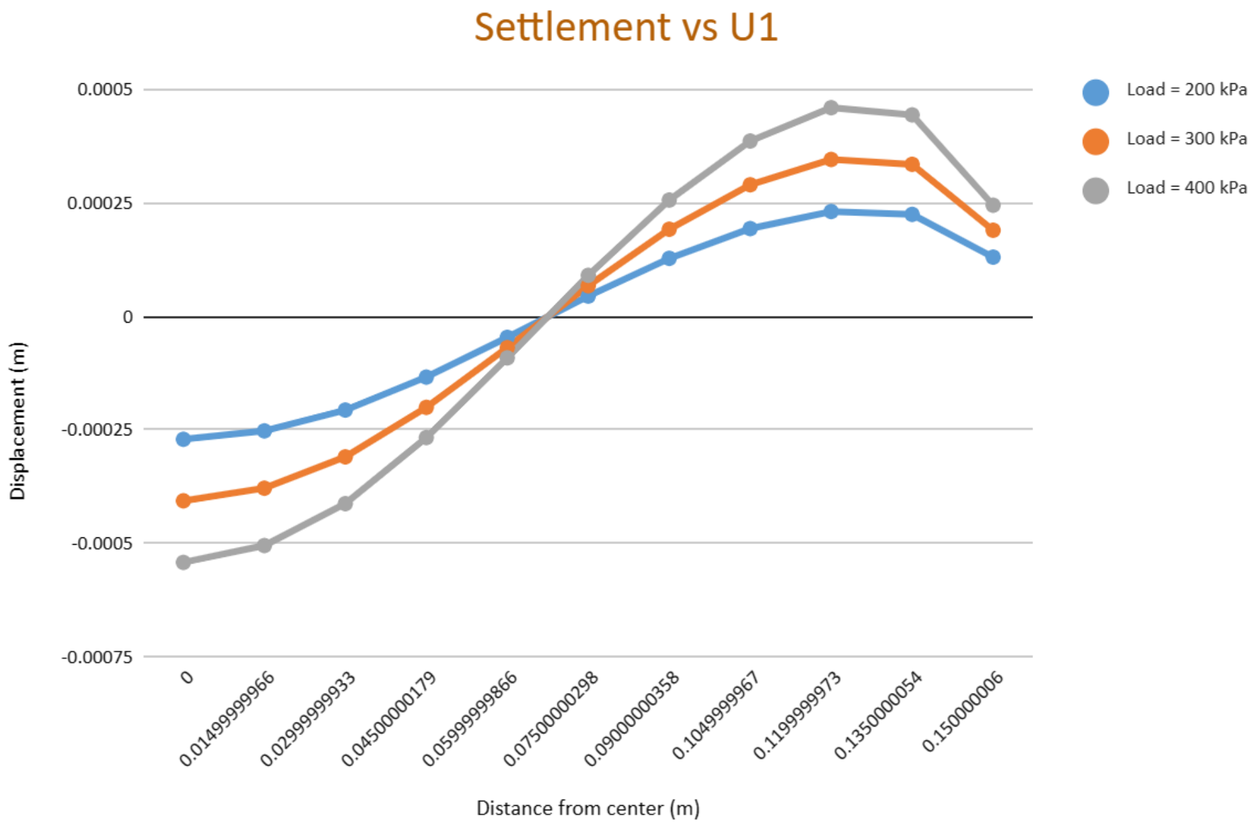


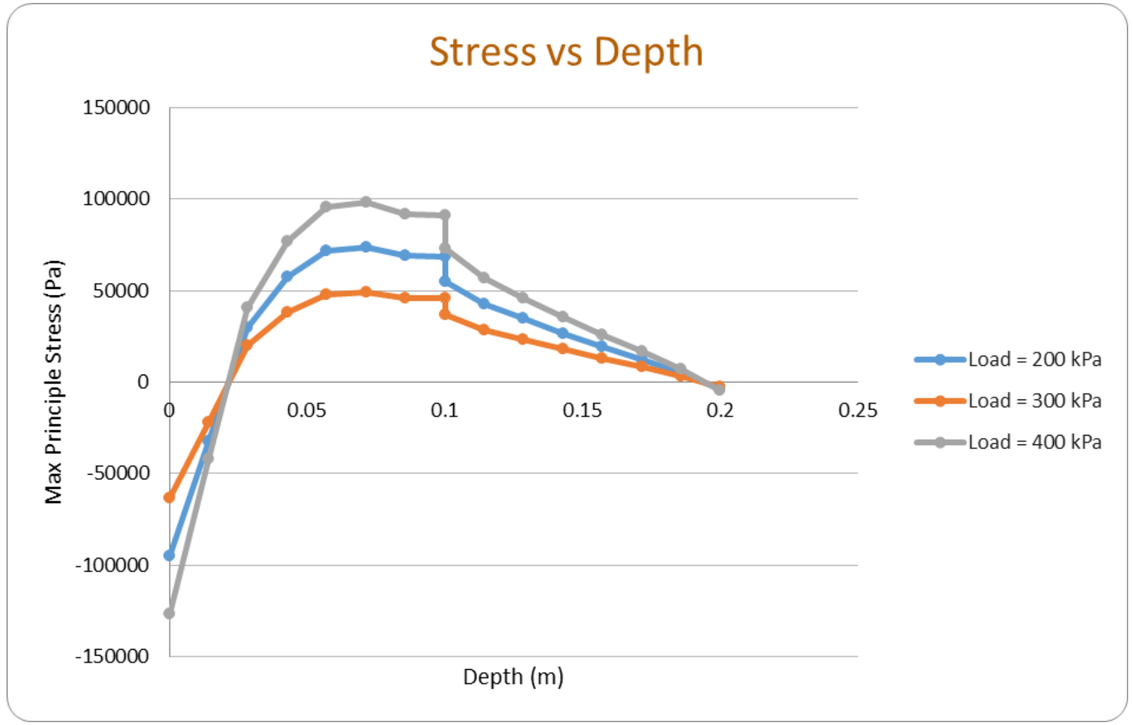
Unsoaked CBR Condition, Embankment's Slope 1:1



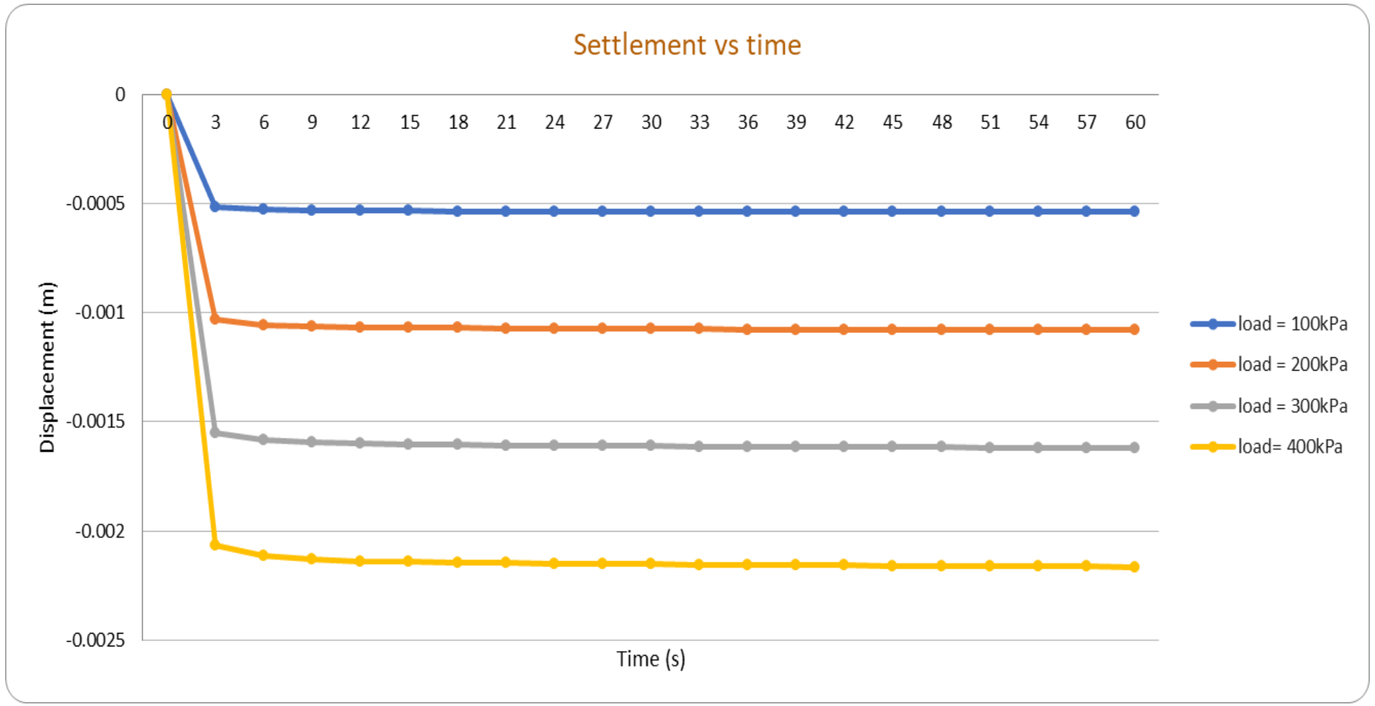


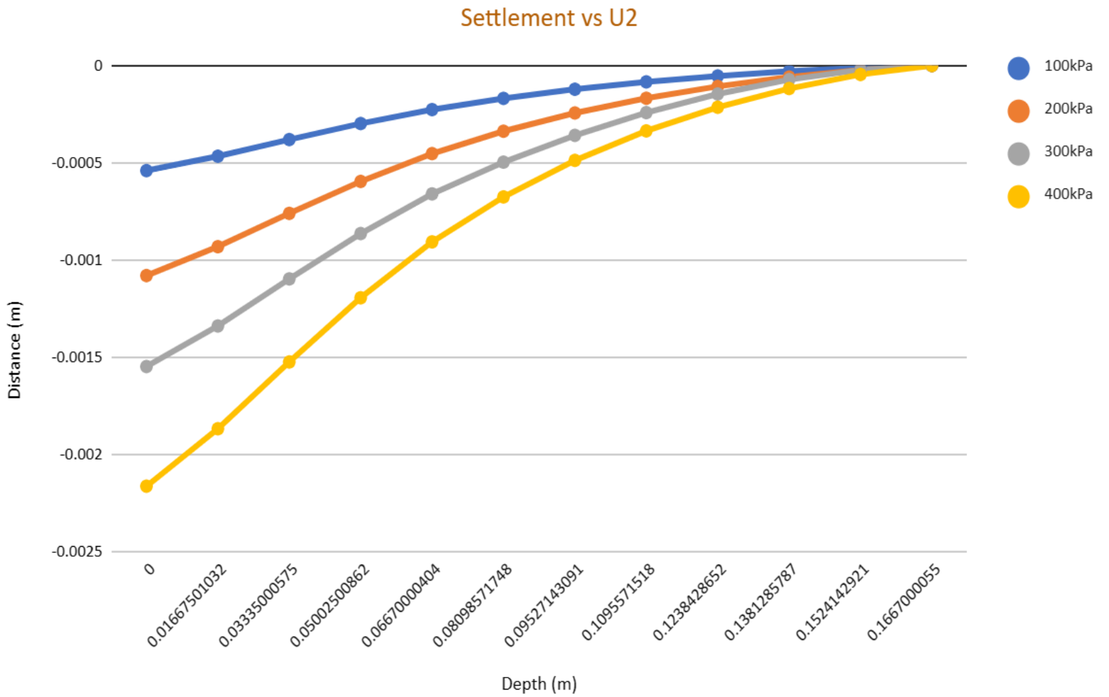
Unsoaked CBR Condition, Embankment's Slope 1:1



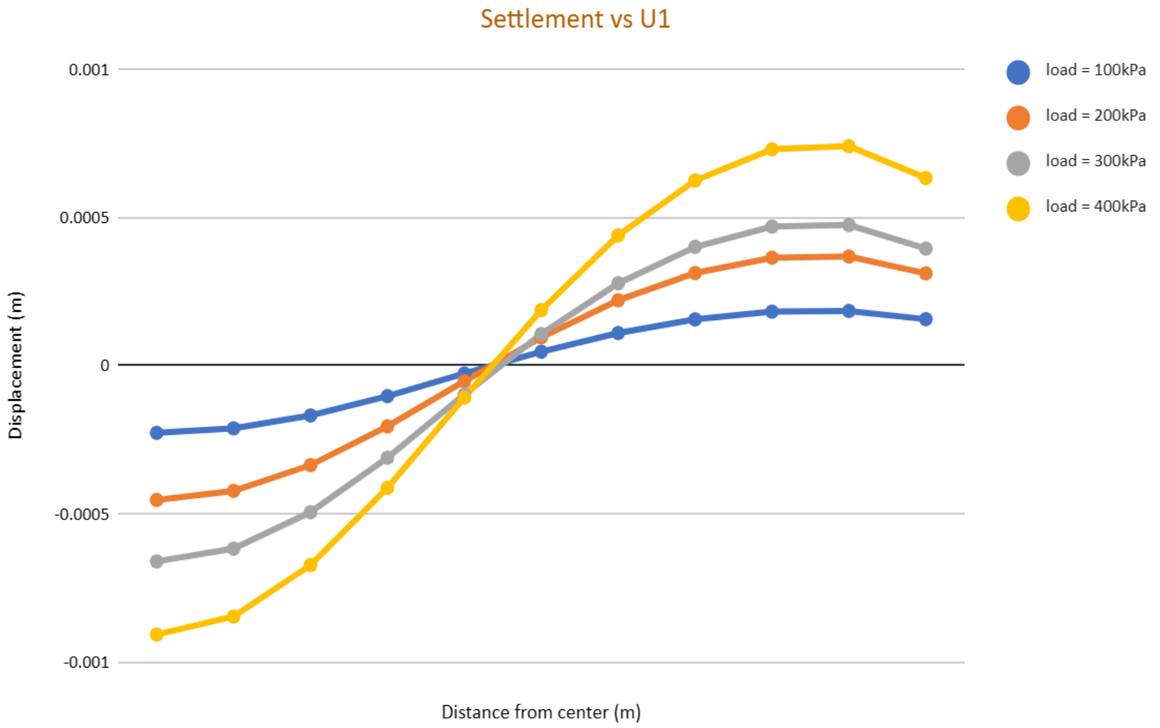


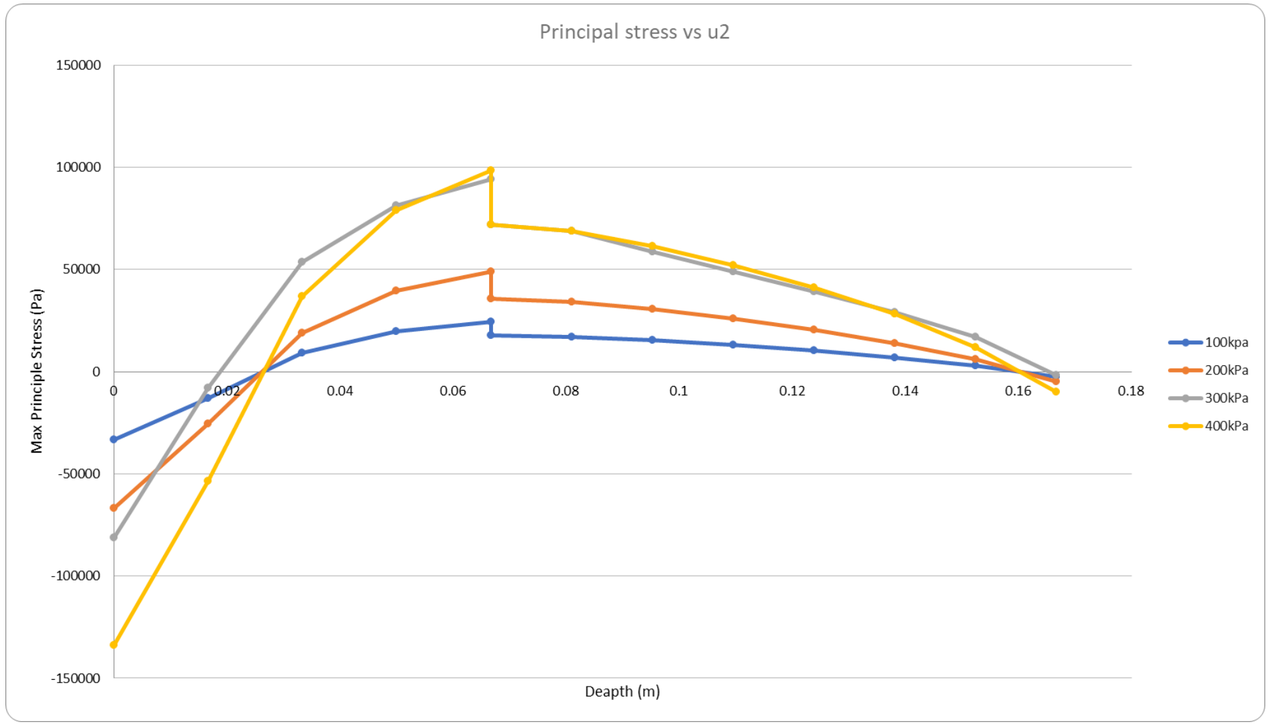
Unsoaked CBR Condition, Embankment's Slope 1:1.5



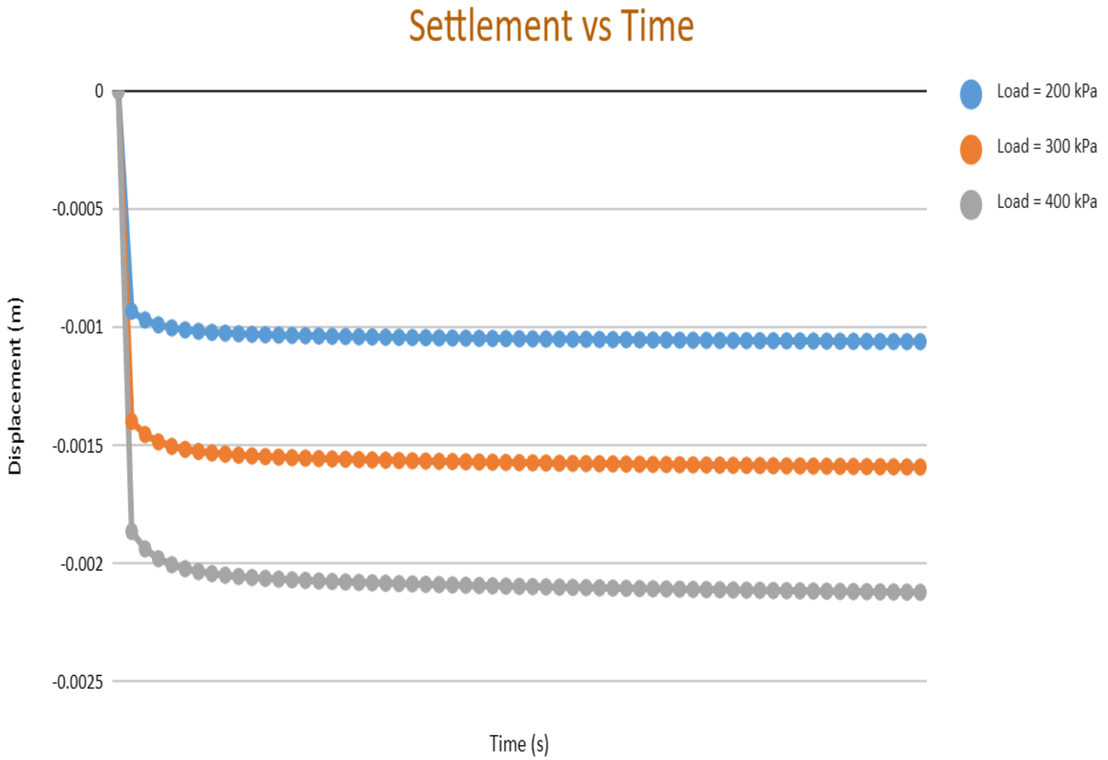


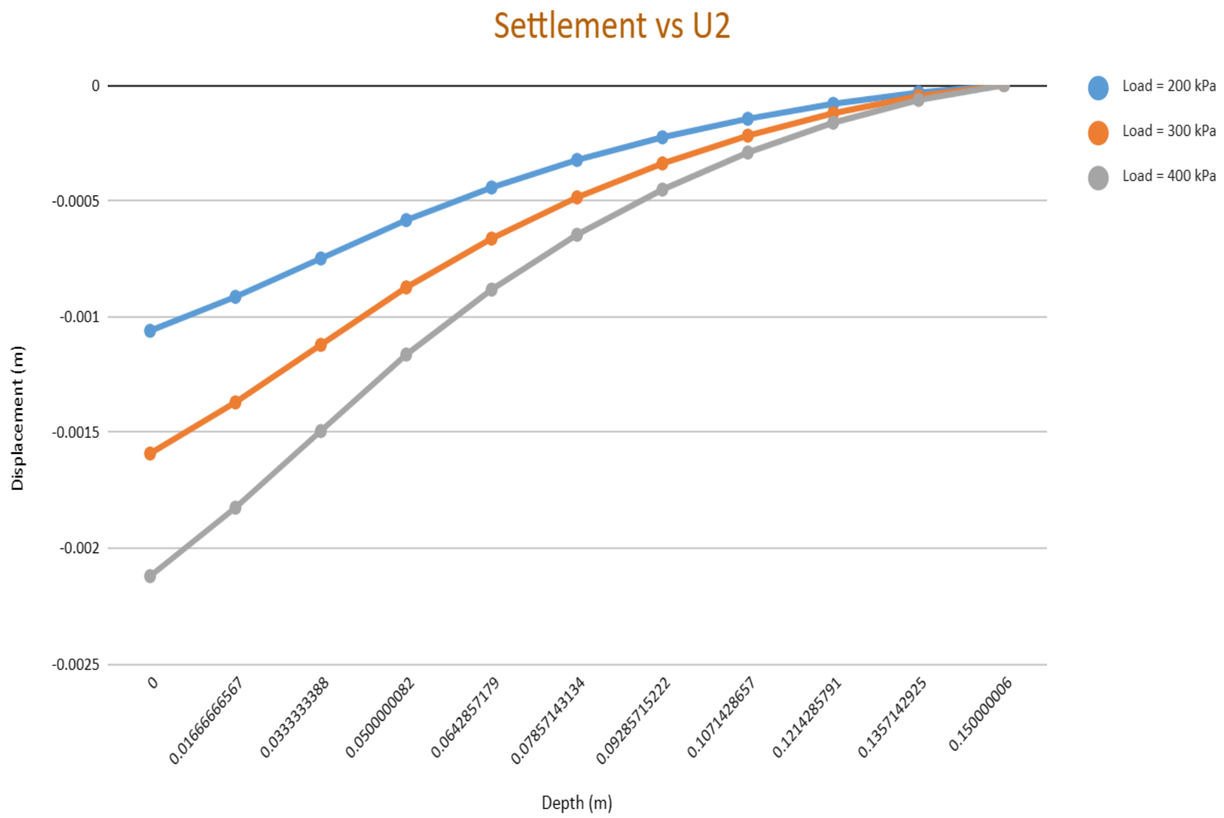
Unsoaked CBR Condition, Embankment's Slope 1:1.5



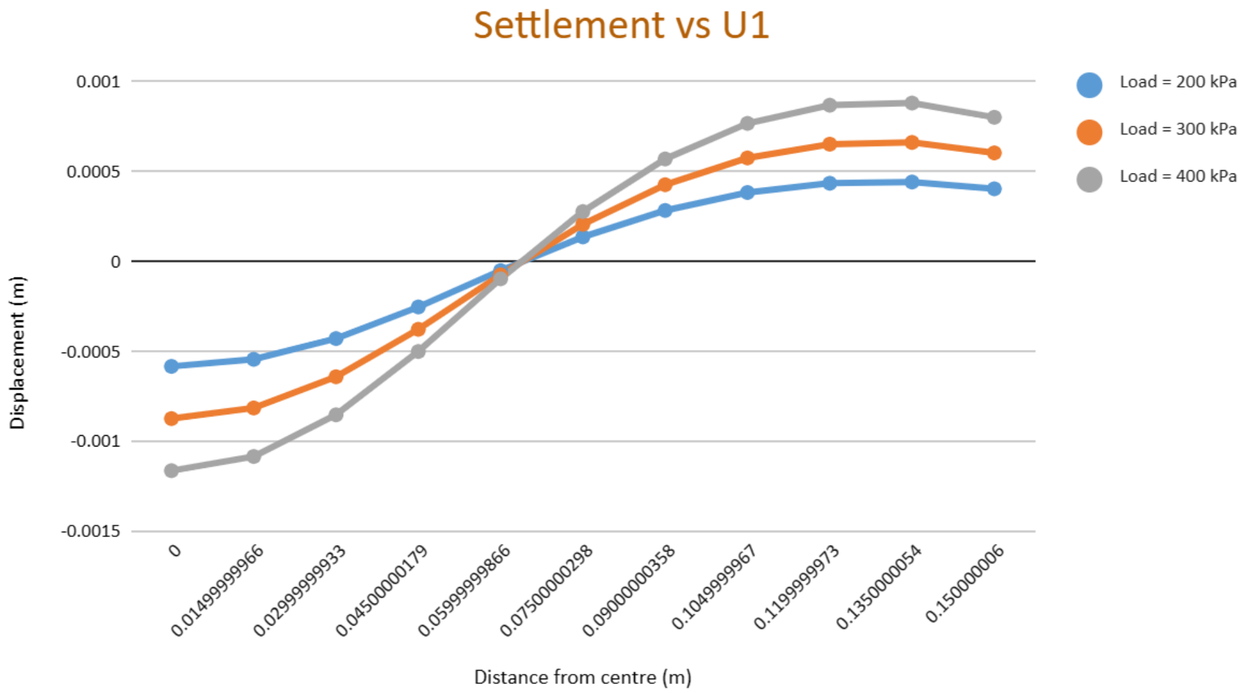


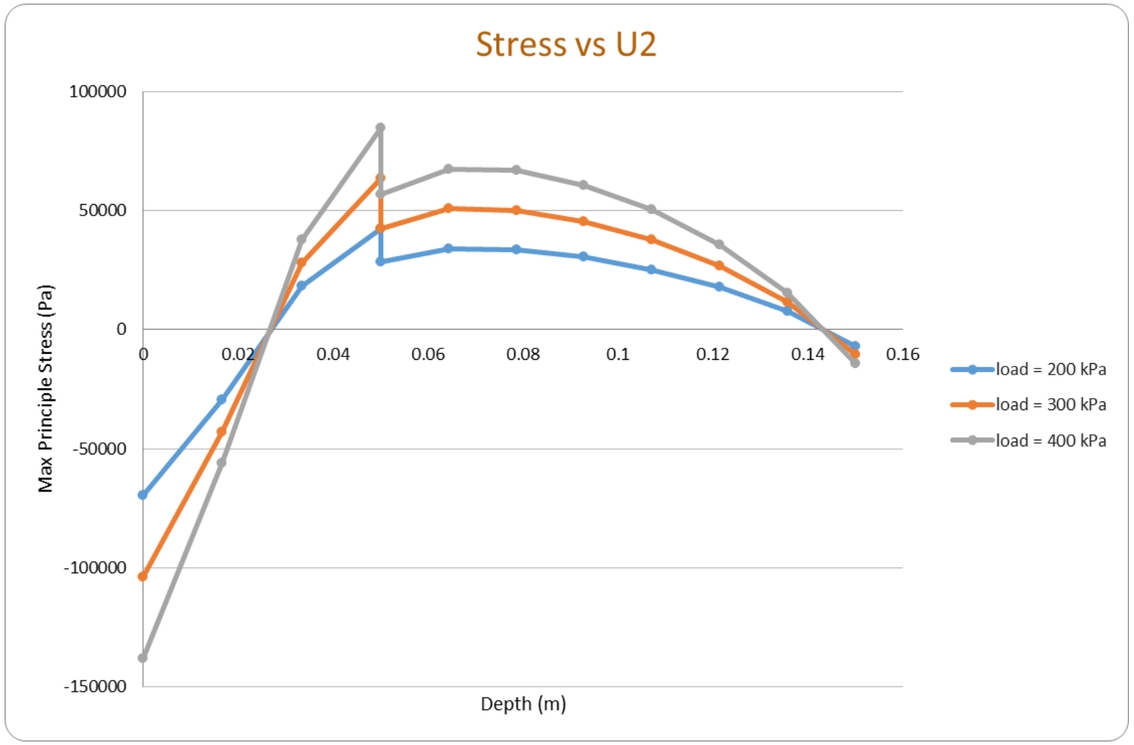
Unsoaked CBR Condition, Embankment's Slope 1:2



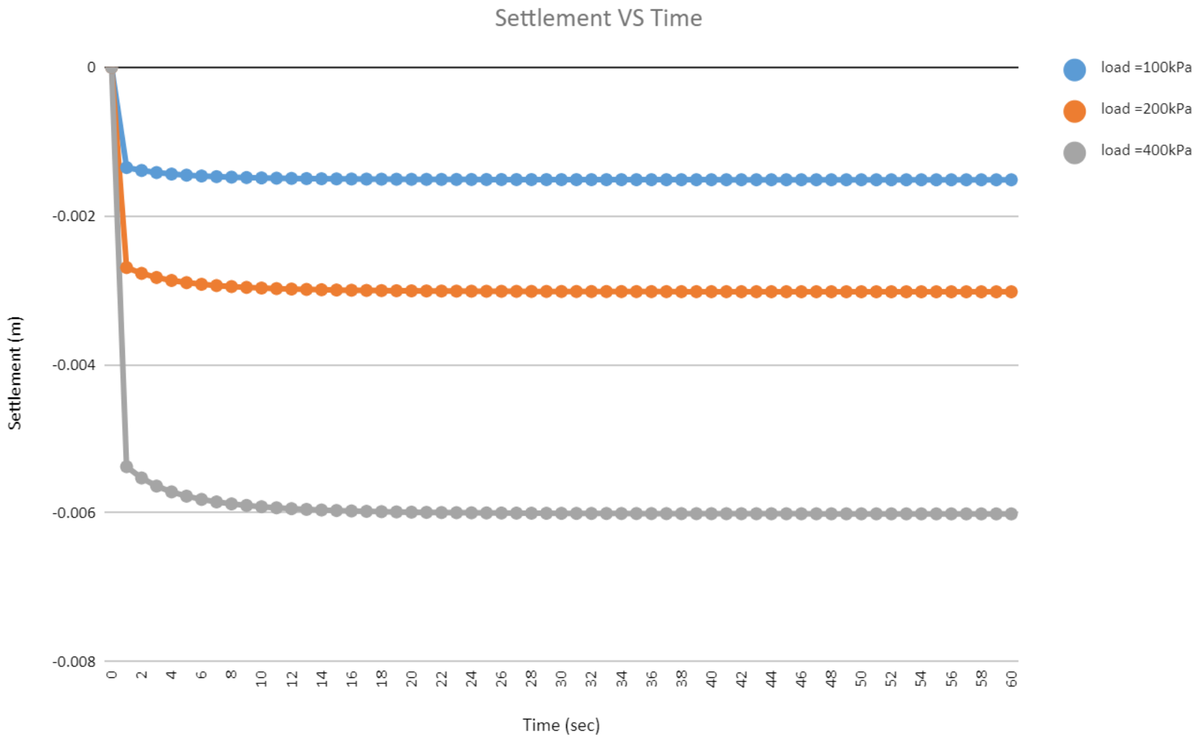


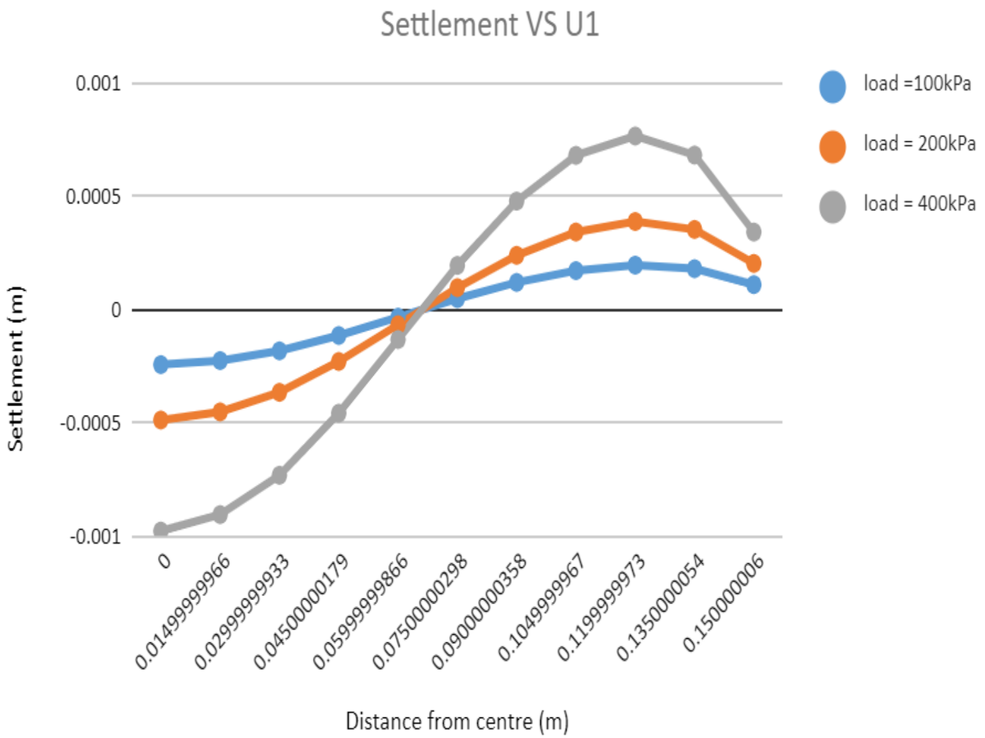
Unsoaked CBR Condition, Embankment's Slope 1:2



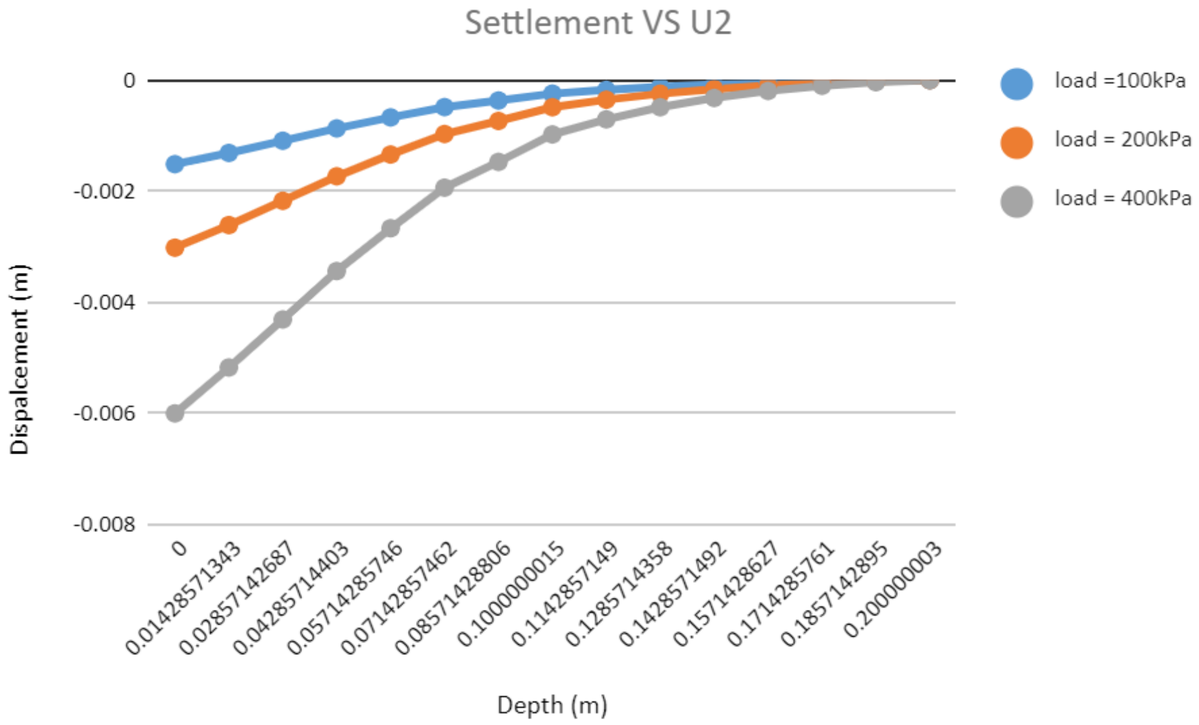


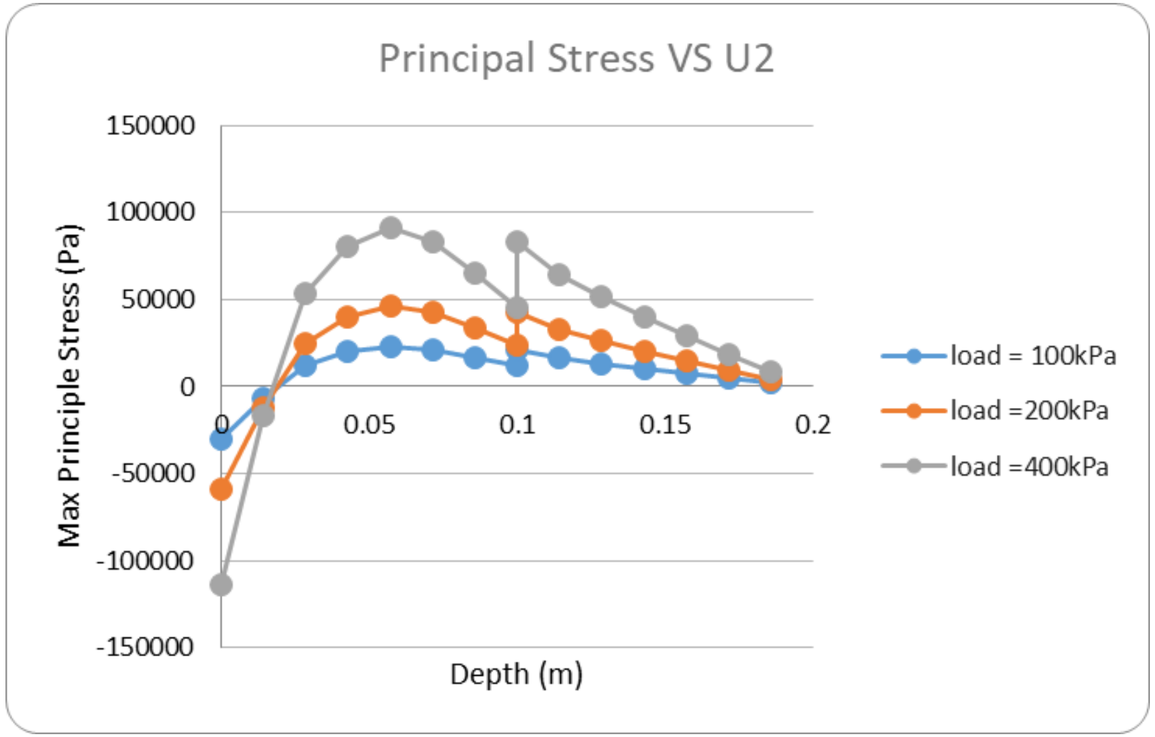
Soaked CBR Condition, Embankment's Slope 1:1



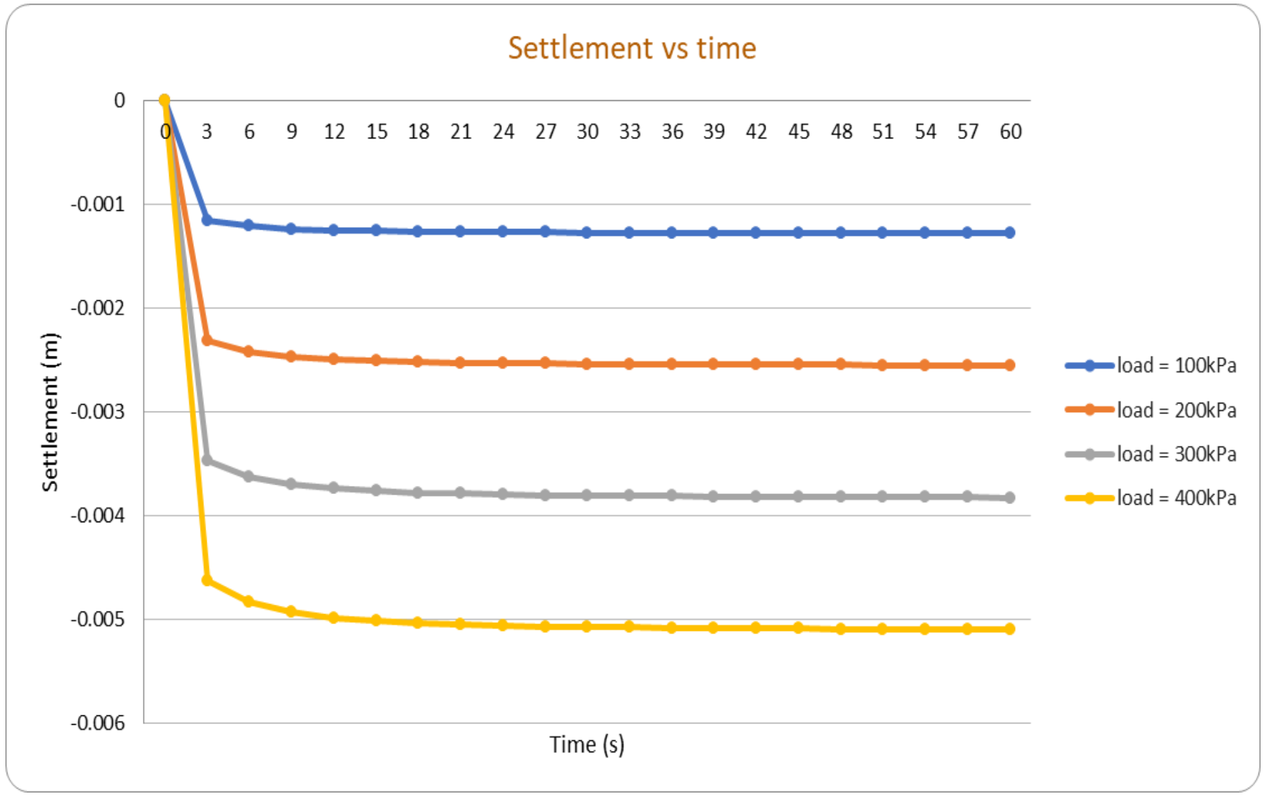


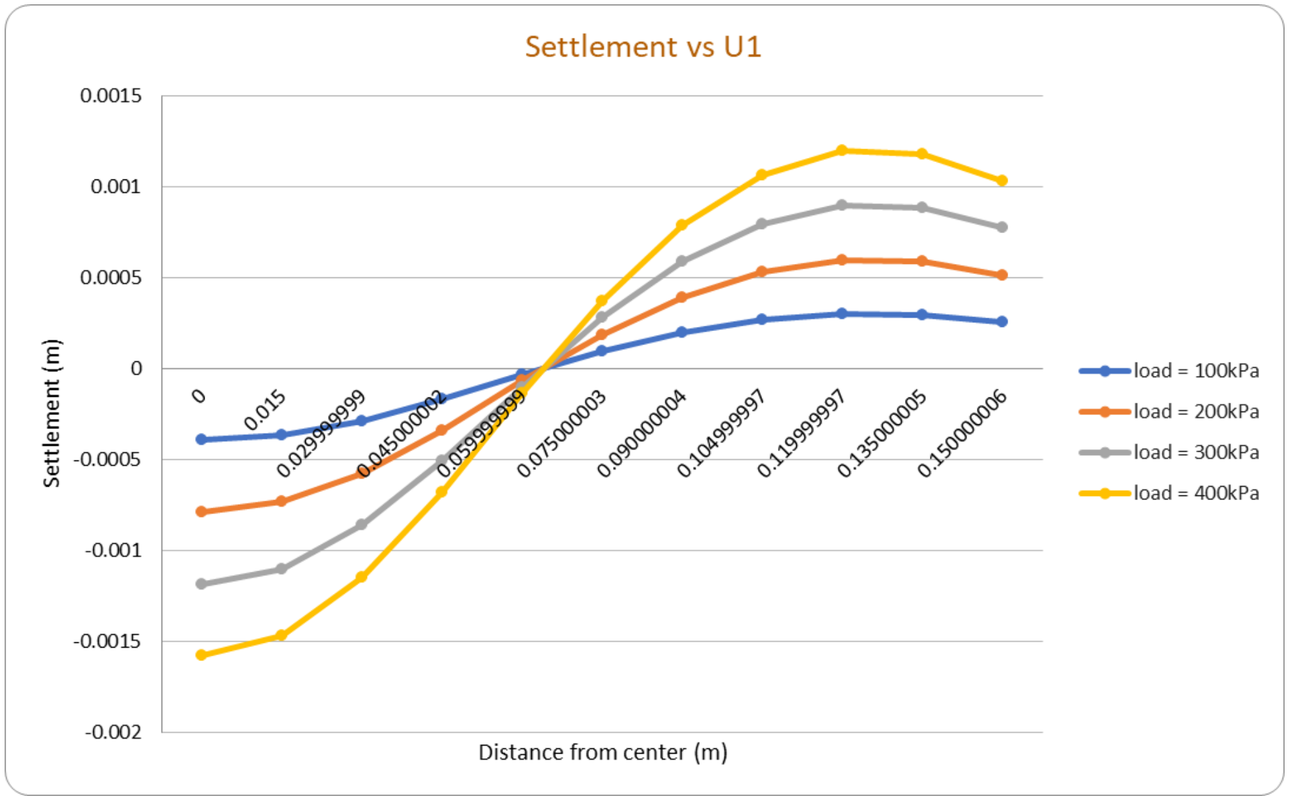
Soaked CBR Condition, Embankment's Slope 1:1



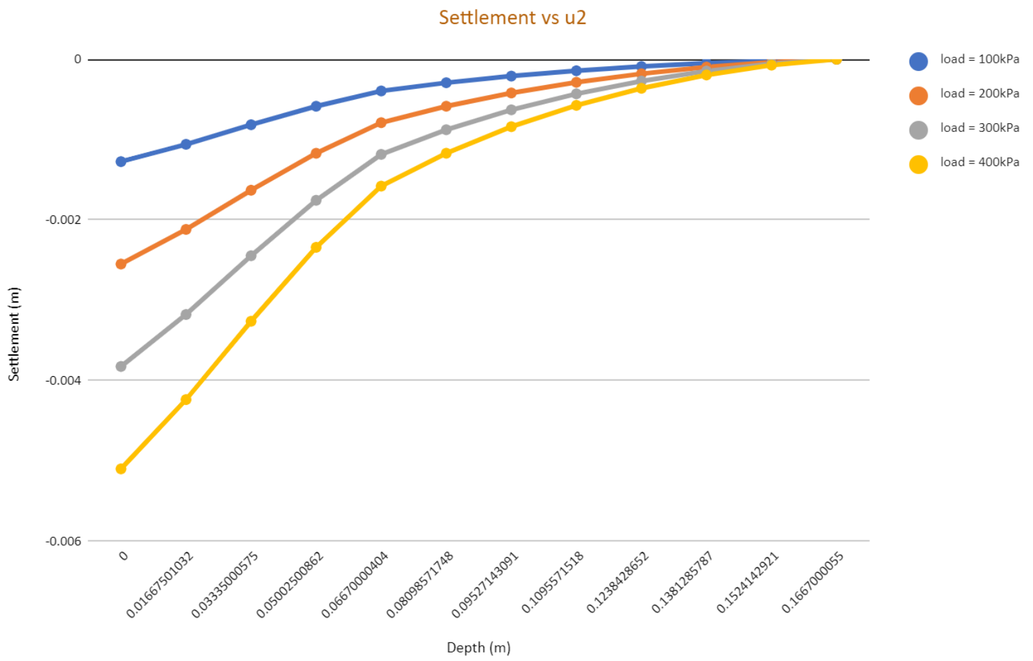


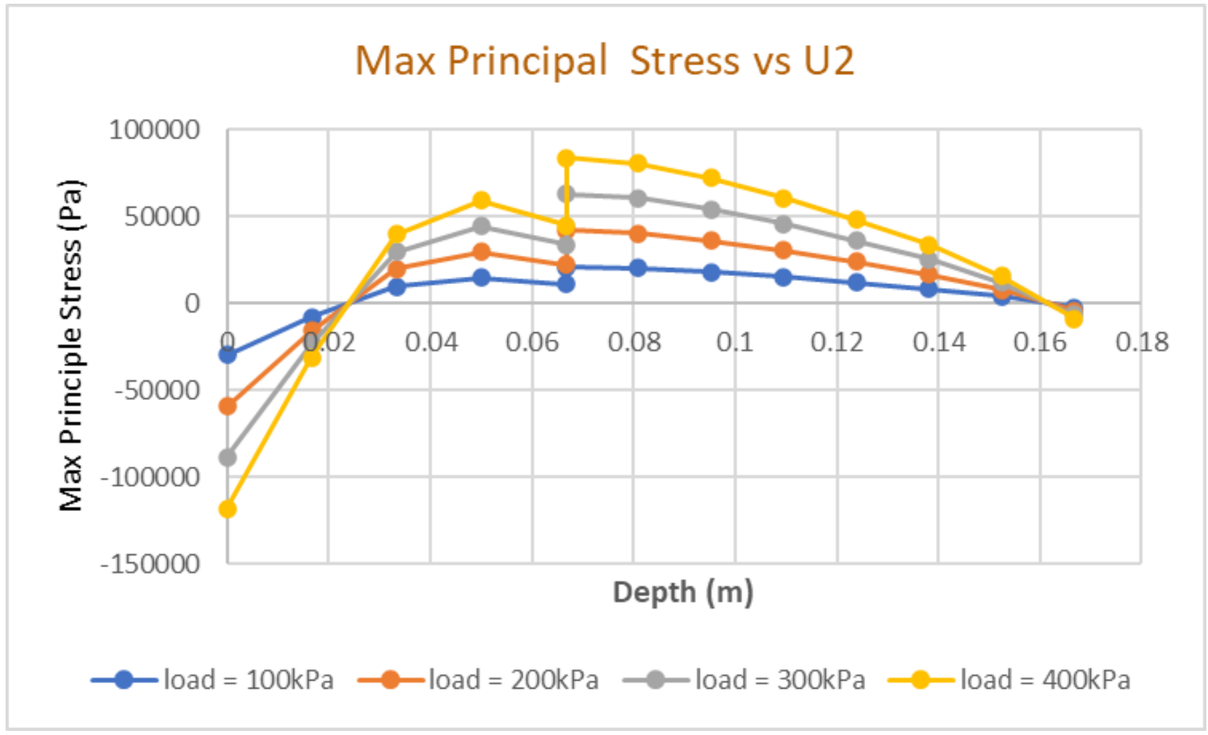
Soaked CBR Condition, Embankment's Slope 1:1.5



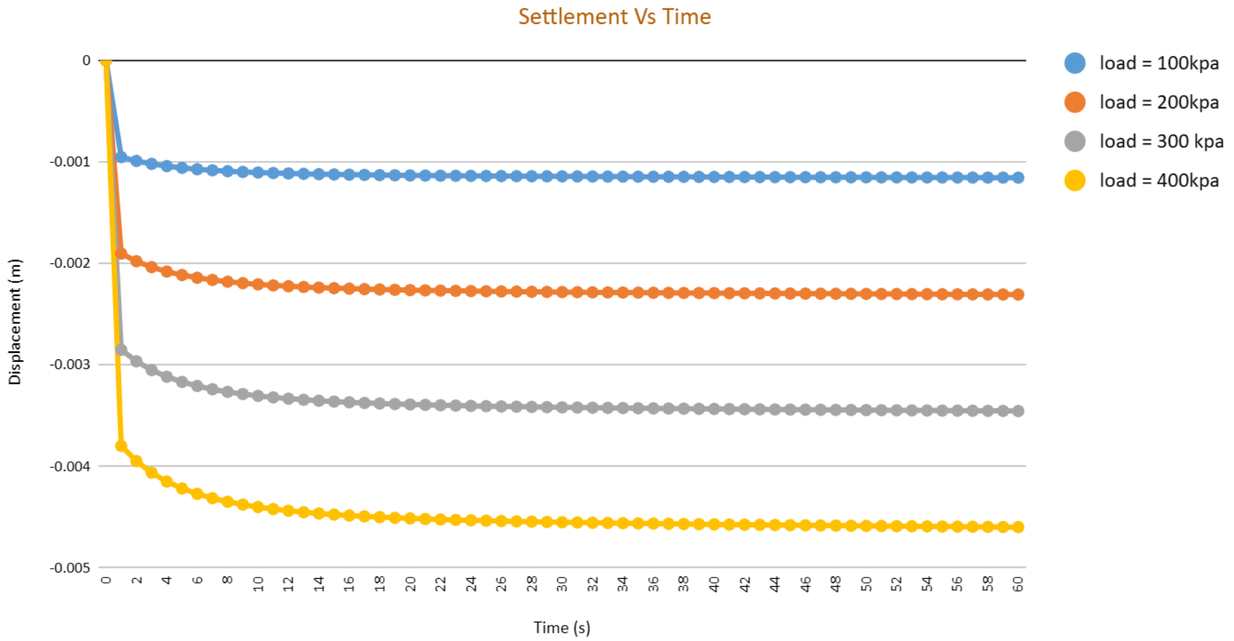


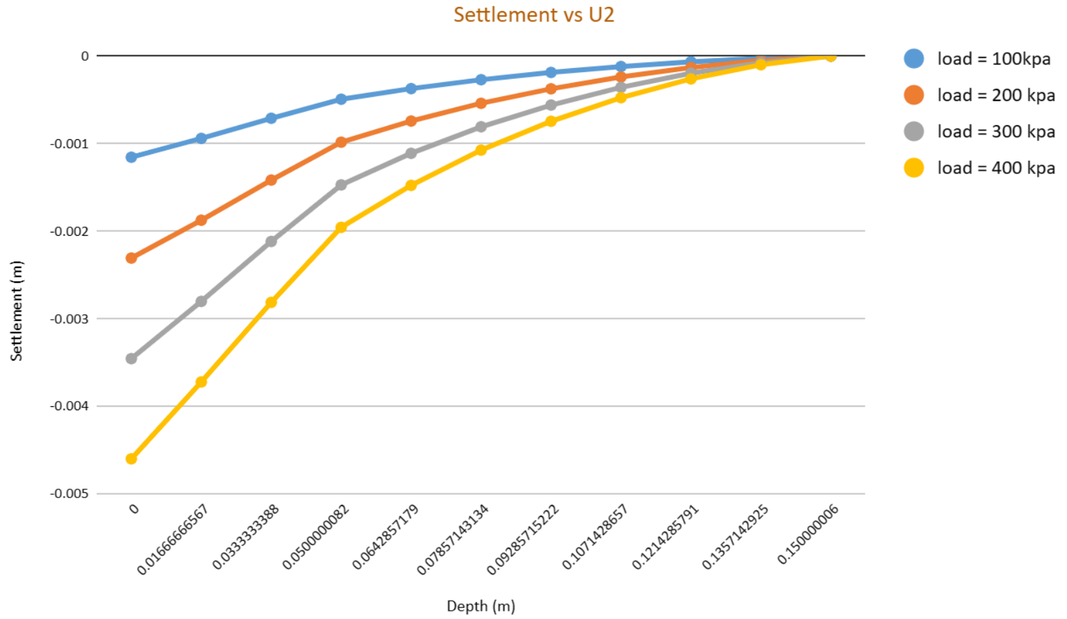
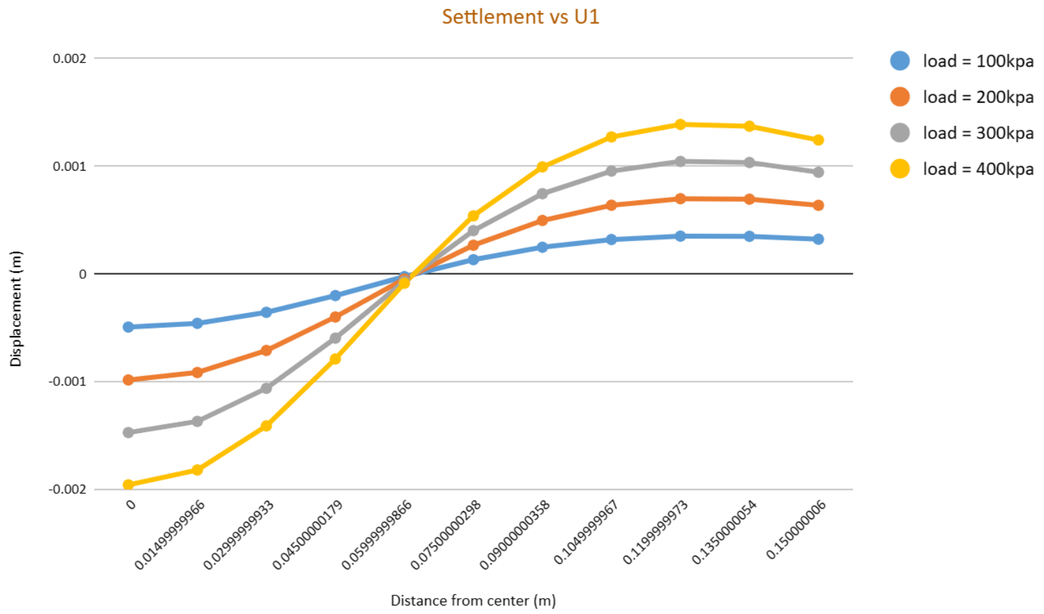
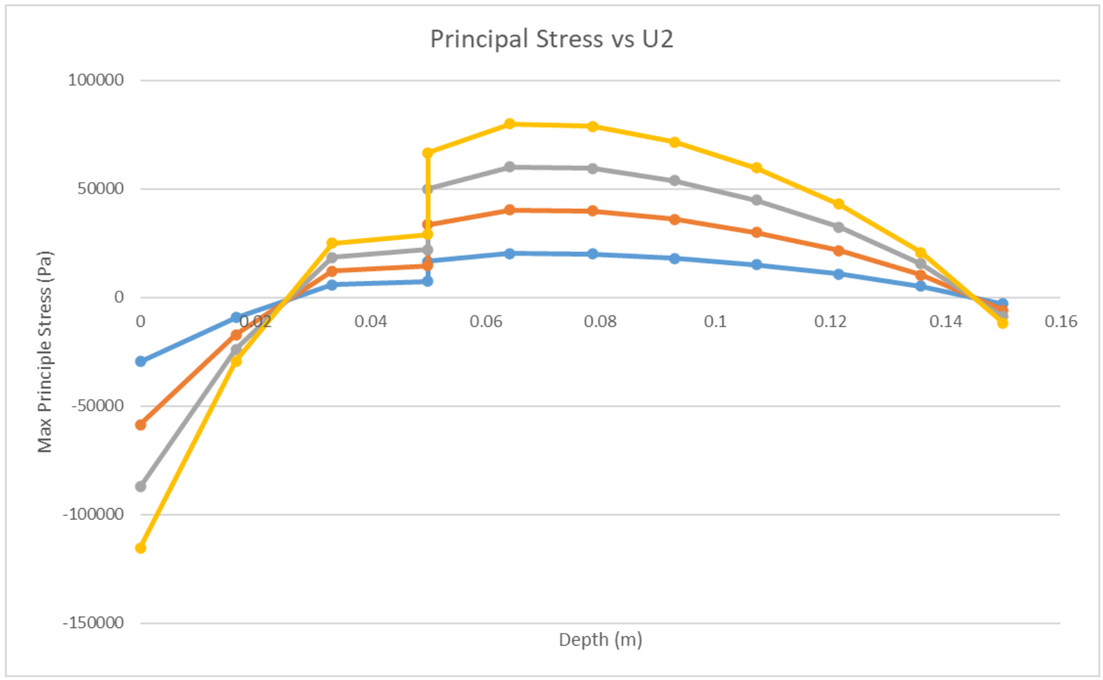
Soaked CBR Condition, Embankment's Slope 1:1.5





Soaked CBR Condition, Embankment's Slope 1:2





Soaked CBR Condition, Embankment's Slope 1:2