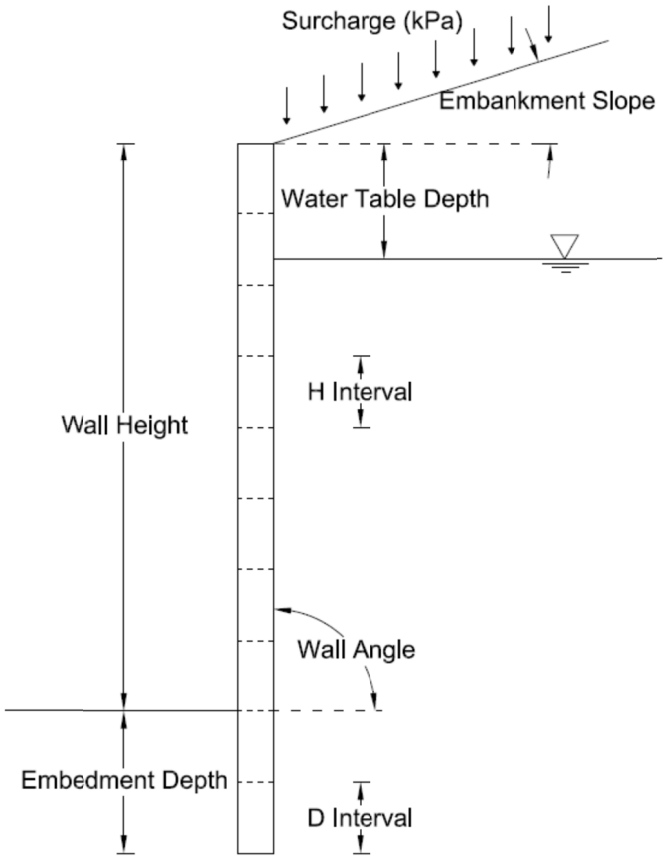
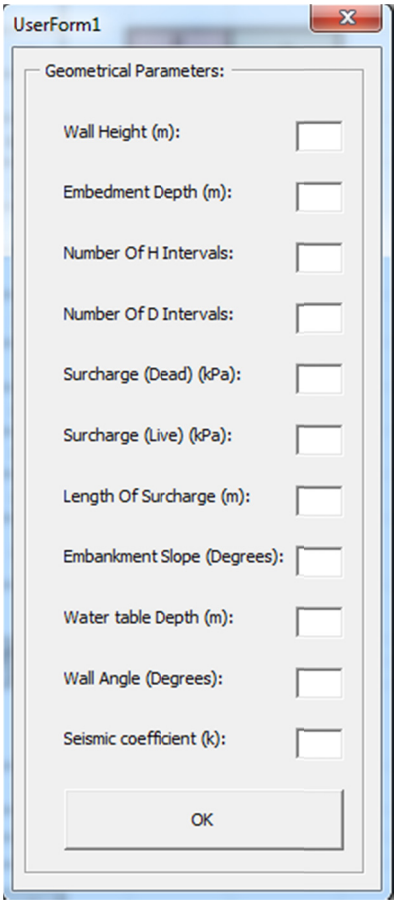
Step 1:

1- Open “Analyze” sheet and click on “Start Analyze” button.
2- In the appeared window, enter the necessary parameters.



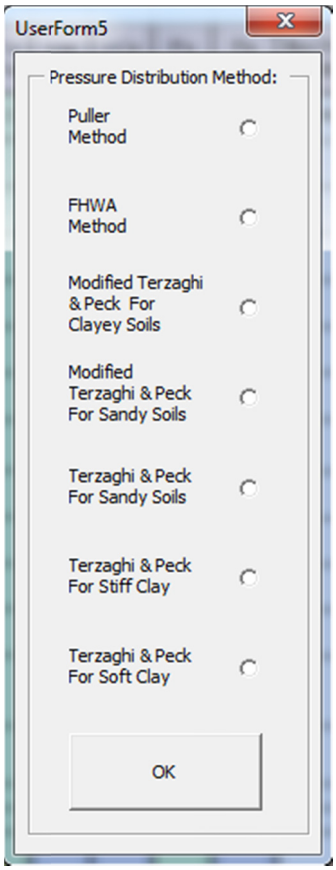


Notes:

- Always enter 0.0 for surcharge (live) and length of surcharge, because these parts are not active.
- Use a large number of D and H intervals to obtain more accurate results.
- Seismic coefficient is the Horizontal acceleration of earthquake in “g”, for example 0.2g

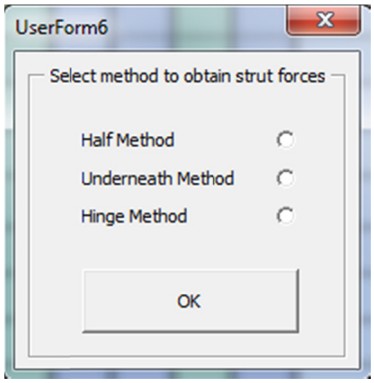
Step 2:

1- After clicking on OK in the previous window, in the following window select the method for calculating lateral earth pressure:



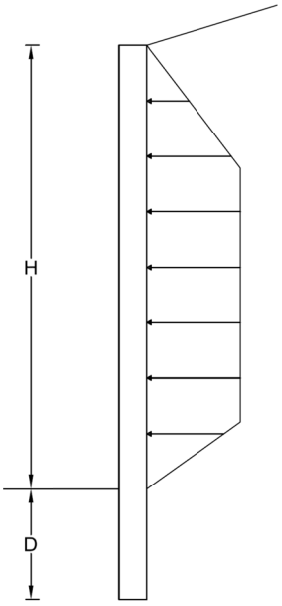
Step 3:

1- After clicking on OK in the previous window, in the following window select the method for calculating strut forces:

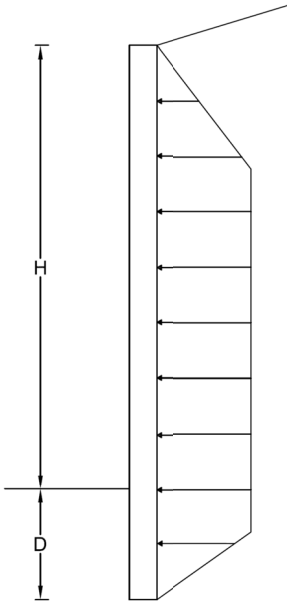


Step 4:

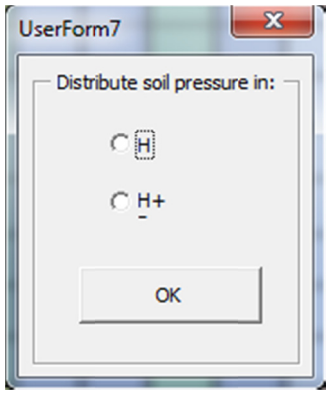
1- In this window, an important assumption is made, for rigid retention systems like Anchored Soldier Piles use “H+”, and for flexible systems such as Shotcrete & Nailing use “H”.



Distribute Soil Pressure in (H)

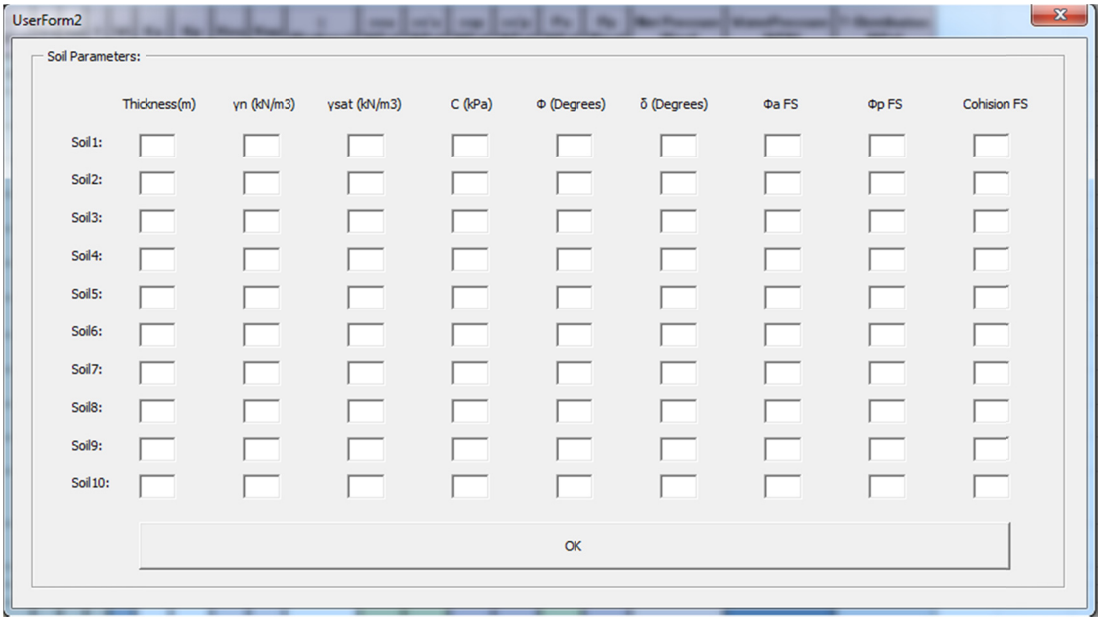


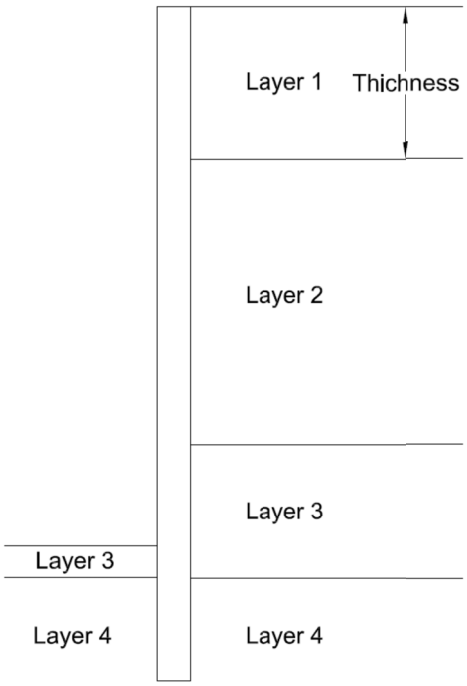
Distribute Soil Pressure in (H+)



Step 5:

1- In this window, enter soil parameters, Enter soil parameters for each layer.



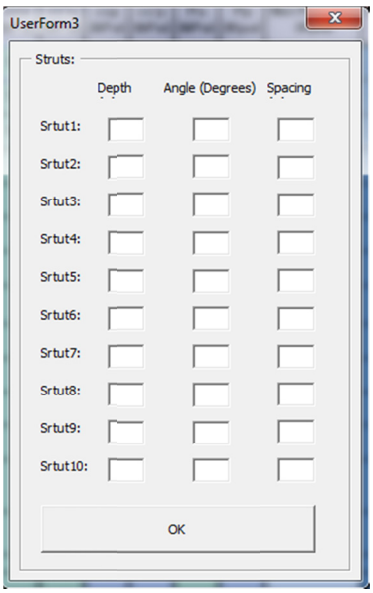


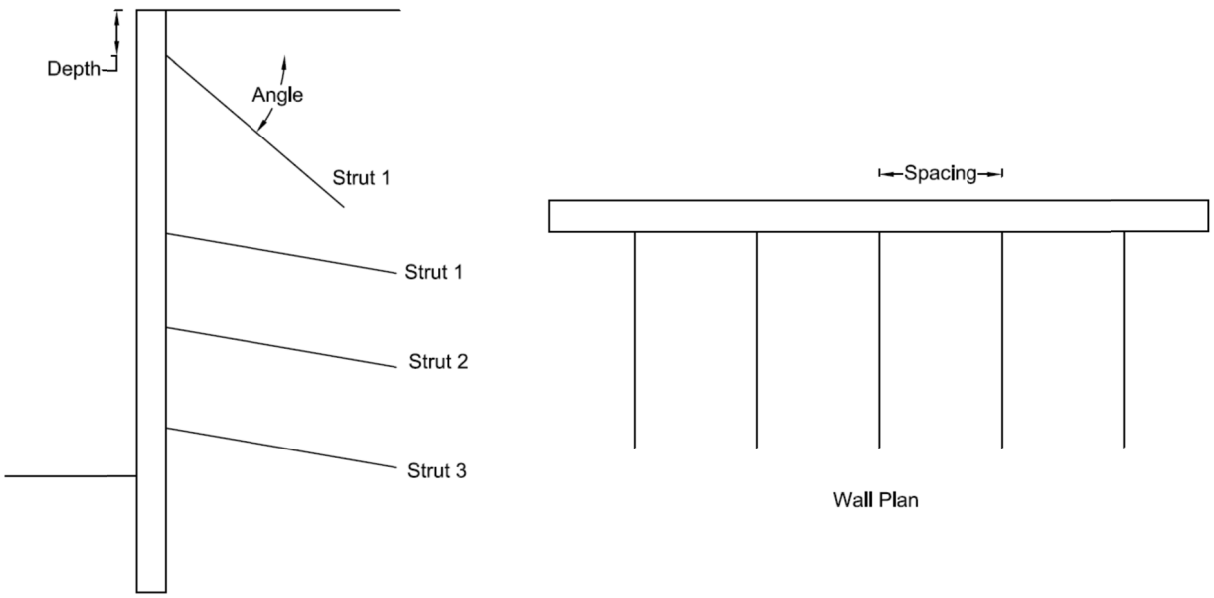
Notes:

- δ is the friction angle between the soil and the wall.
- You can enter safety factor (FS) for φ in the calculation of active and passive lateral pressure coefficient, and for cohesion of the soil.

Step 5:

In this step, you can enter the depth (m), angle, and spacing (m) of 3 to 10 rows of struts**:**



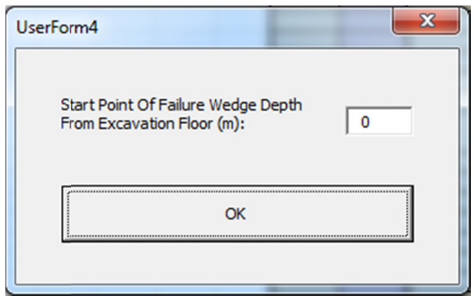


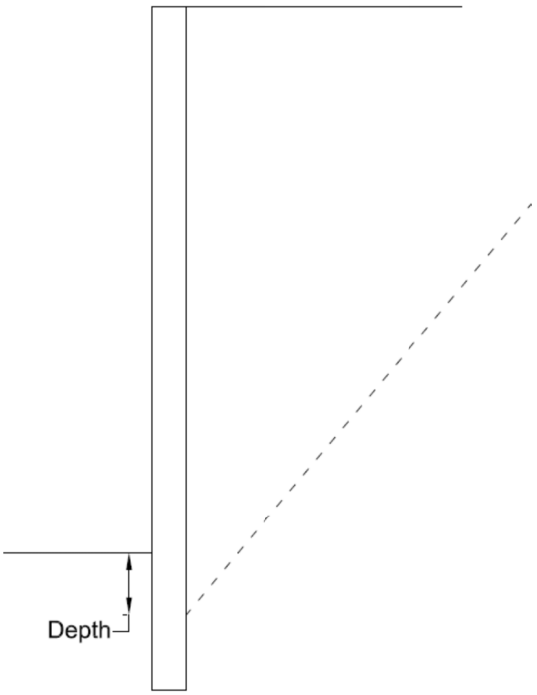
Step 6:

Now, go to "Pressure Distribution Diagrams" sheet and observe lateral pressures and strut forces.

Step 7:

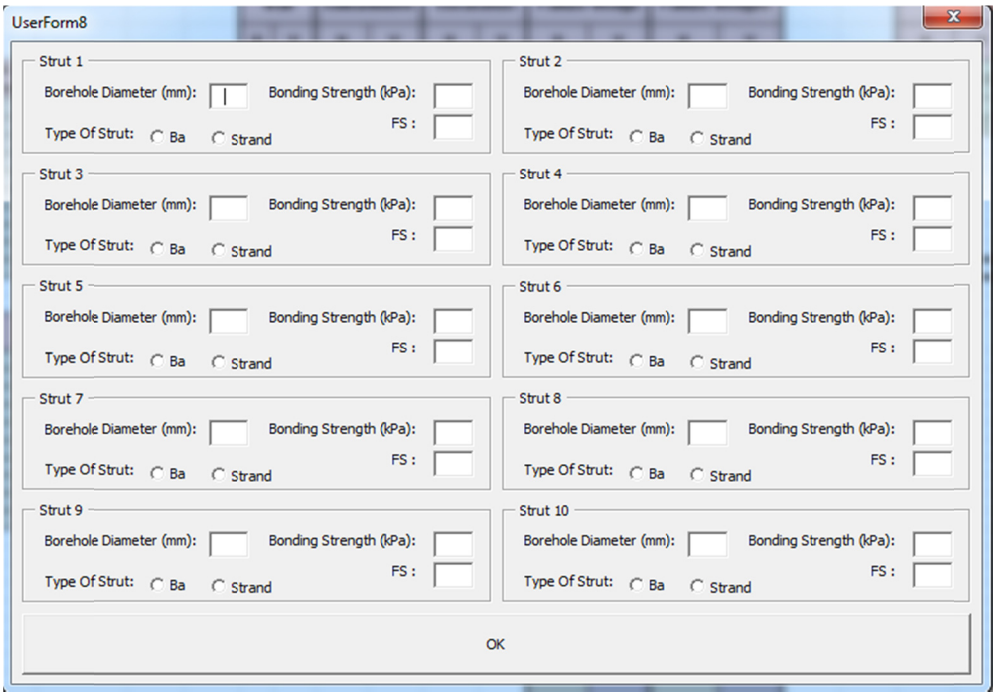
1- Now, go to "Draw" sheet and click on Calculate button.
2- Enter the depth of the start point of failure wedge from the bottom of the excavation.





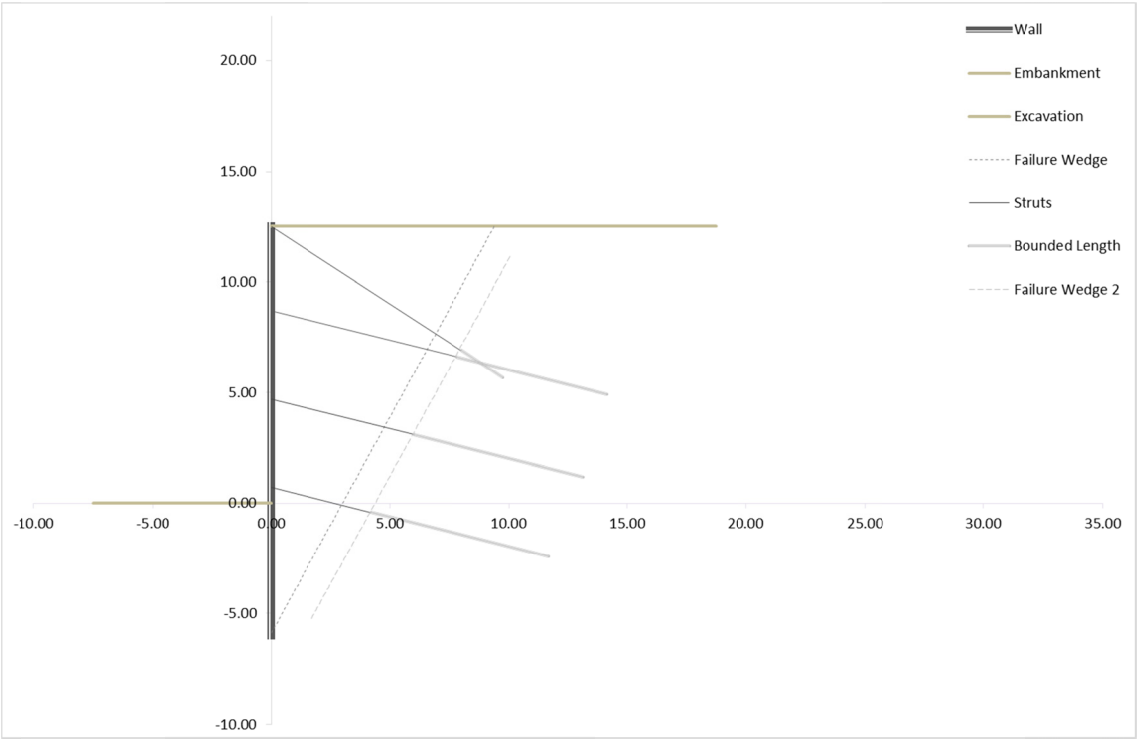
Step 8:

1- Enter the parameters of nails or anchors here:



Step 8:

1- Go to “Failure Wedge” sheet and observe the failure wedge and the free and bonded length of the nails and anchors:



Step 9:

- Go to “Shear-Moment Analysis” sheet and click on “Analize”.

Step 10:

- Go to “Shear-Moment Diagram” sheet and observe the shear and moment diagram of the wall.

Step 10:

- Go to “Summary” sheet and observe the safety factors and all necessary information.