

ภาคผนวก ง.7

รายการคำนวณระบบป้องกันดินพังช่วงก่อสร้างชั้นใต้ดิน อาคาร A

Students of Geotechnics, Example 2

General Data

Licensed User	: Students of Geotechnics
File Name	: Pattaya_6.5.spw
Problem Name	: Example 2
Length (m)	: 16.000
Number of Elements	: 100
Number of Layers	: 6
Number of Loading Steps	: 3
Profile from Catalogue	: 2

Data of Layers

Step 0, Left side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
2	1.500	4.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
3	4.500	6.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Step 0, Right side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
2	1.500	4.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
3	4.500	6.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Step 1, Left side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
2	1.500	4.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
3	4.500	6.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Step 1, Right side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	0.000	10.000	1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000
2	1.500	4.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
3	4.500	6.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Step 2, Left side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
2	1.500	4.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
3	4.500	6.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Step 2, Right side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	0.000	10.000	1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000
2	1.500	4.500	0.000	10.000	1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000
3	4.500	6.500	16.000	10.000	1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Step 3, Left side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
2	1.500	4.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
3	4.500	6.500	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Step 3, Right side

Layer	Top	Bottom	Wd	Ws	Zw	Cap	q	c	Ka	Kp	Kn	Dw
	(m)	(m)	(kN/m ²)	(kN/m ²)	(m)	(m)	(kN/m ²)	(kN/m ²)	(-)	(-)	(-)	(m)
1	0.000	1.500	0.000	10.000	1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000

Students of Geotechnics, Example 2

2	1.500	4.500	0.000	10.000	1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000
3	4.500	6.500	0.000	10.000	1.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000
4	6.500	14.000	16.000	20.000	1.000	0.000	0.000	0.000	0.300	3.000	1.000	0.020
5	14.000	15.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020
6	15.000	16.000	16.000	20.000	1.000	0.000	0.000	0.000	0.333	3.000	1.000	0.020

Data of Anchors and Lateral Forces

Step 0 :

Point	Fx (kN/m)	Fa (kN/m)	Fw (m)
0	0.000	0.000	1.000
1	0.000	0.000	1.000
2	0.000	0.000	1.000
3	0.000	0.000	1.000
4	0.000	0.000	1.000
5	0.000	0.000	1.000
6	0.000	0.000	1.000

Step 1 :

Point	Fx (kN/m)	Fa (kN/m)	Fw (m)
0	0.000	0.000	1.000
1	0.000	0.000	1.000
2	0.000	0.000	1.000
3	0.000	0.000	1.000
4	0.000	0.000	1.000
5	0.000	0.000	1.000
6	0.000	0.000	1.000

Step 2 :

Point	Fx (kN/m)	Fa (kN/m)	Fw (m)
0	0.000	0.000	1.000
1	0.000	50.000	0.100
2	0.000	0.000	1.000
3	0.000	0.000	1.000
4	0.000	0.000	1.000
5	0.000	0.000	1.000
6	0.000	0.000	1.000

Step 3 :

Point	Fx (kN/m)	Fa (kN/m)	Fw (m)
0	0.000	0.000	1.000
1	0.000	50.000	0.100
2	0.000	50.000	0.100
3	0.000	0.000	1.000
4	0.000	0.000	1.000
5	0.000	0.000	1.000
6	0.000	0.000	1.000

Data of Axial Forces and Moment

Step	NA (kN/m)	NB (kN/m)	MA (kNm/m)
0	0.000	0.000	0.000
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000

Catalogue of Profiles

No	Profile Name	Area (m ² /m)	Weight (kN/m)	E (GN/m ²)	h (m)	i (m)	EI (kNm ² /m)
1	Larssen 20	0.010100	78.000	210.000	0.220000	0.080800	13847.2
2	Larssen 21	0.012100	78.000	210.000	0.220000	0.079800	16181.2
3	Larssen 22	0.015500	78.000	210.000	0.340000	0.117000	44557.7
4	Larssen 23	0.019700	78.000	210.000	0.420000	0.146000	88184.3
5	Larssen 24	0.022300	78.000	210.000	0.420000	0.153000	109624.3
6	Larssen 25	0.026200	78.000	210.000	0.420000	0.156100	134068.4
7	Larssen 61	0.012000	78.000	210.000	0.150000	0.056570	8064.4
8	Larssen 62	0.014000	78.000	210.000	0.310000	0.113000	37540.9
9	Larssen 31	0.012700	78.000	210.000	0.150000	0.052100	7239.3
10	Larssen 32	0.015500	78.000	210.000	0.250000	0.082600	22208.1
11	Larssen 42	0.015500	78.000	210.000	0.210000	0.075900	18751.4
12	Larssen 43	0.020800	78.000	210.000	0.410000	0.127000	70451.5
13	Larssen 45	0.025400	78.000	210.000	0.410000	0.124000	82015.6
14	Hoesch 95	0.012000	78.000	210.000	0.190000	0.076800	14863.6
15	Hoesch 116	0.014800	78.000	210.000	0.250000	0.101000	31704.7
16	Hoesch 122	0.015500	78.000	210.000	0.190000	0.075900	18751.4
17	Hoesch 134	0.017100	78.000	210.000	0.300000	0.122000	53448.4
18	Hoesch 155	0.019700	78.000	210.000	0.300000	0.123000	62588.7
19	Hoesch 175	0.022300	78.000	210.000	0.340000	0.141000	93102.7

Students of Geotechnics, Example 2

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Hoesch 215

0.027400

78.000

210.000

0.340000

0.140000

112778.4

Cross Sections

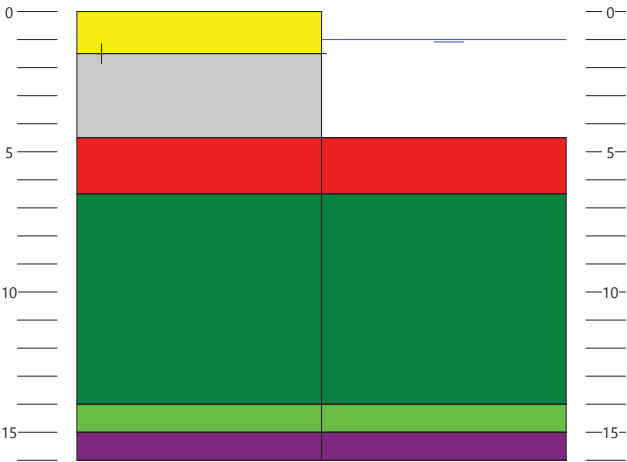
Step 0 :



Step 1 :

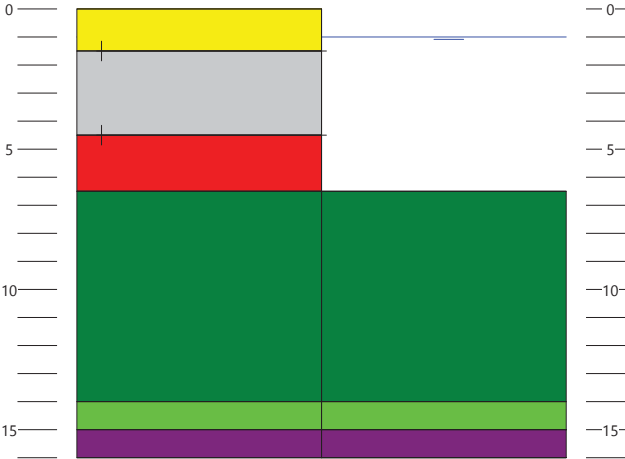


Step 2 :



Students of Geotechnics, Example 2

Step 3 :



Results after Step 1 :

i	z	w	M	Q-	Q+	F	f
	(m)	(m)	(kNm)	(kN)	(kN)	(kN)	(kN/maj)
0	0.000000	0.010447	0.000000	0.000000	0.000000	0.000000	0.000000
1	0.166667	0.010051	-0.005556	0.066667	0.066667	0.000000	0.400001
2	0.333333	0.009656	-0.033333	0.266667	0.266667	0.000000	1.200005
3	0.500000	0.009260	-0.105556	0.600000	0.600000	0.000000	1.999994
4	0.666667	0.008864	-0.244444	1.066667	1.066667	0.000000	2.799996
5	0.833333	0.008469	-0.472222	1.666667	1.666667	0.000000	3.600014
6	1.000000	0.008075	-0.811111	2.400000	2.400000	0.000000	4.399989
7	1.166667	0.007682	-1.281250	3.241667	3.241667	0.000000	5.049992
8	1.333333	0.007291	-1.898611	4.166667	4.166667	0.000000	5.550022
9	1.500000	0.006904	-2.677083	5.175000	5.175000	0.000000	6.049986
10	1.657895	0.006541	-3.556901	5.969353	5.969353	0.000000	5.030894
11	1.815789	0.006184	-4.531937	6.381109	6.381109	0.000000	2.607800
12	1.973684	0.005834	-5.543654	6.433965	6.433965	0.000000	0.334754
13	2.131579	0.005492	-6.537189	6.150812	6.150812	0.000000	-1.793299
14	2.289474	0.005161	-7.461215	5.553524	5.553524	0.000000	-3.782818
15	2.447368	0.004841	-8.276987	4.779582	4.779582	0.000000	-4.901656
16	2.605263	0.004533	-8.965908	3.946760	3.946760	0.000000	-5.274531
17	2.763158	0.004239	-9.521023	3.084691	3.084691	0.000000	-5.459761
18	2.921053	0.003960	-9.939764	2.219365	2.219365	0.000000	-5.480389
19	3.078947	0.003697	-10.223379	1.373086	1.373086	0.000000	-5.359792
20	3.236842	0.003449	-10.376348	0.564519	0.564519	0.000000	-5.120916
21	3.394737	0.003217	-10.405819	-0.191213	-0.191213	0.000000	-4.786295
22	3.552632	0.003000	-10.321063	-0.882365	-0.882365	0.000000	-4.377289
23	3.710526	0.002800	-10.132953	-1.500365	-1.500365	0.000000	-3.914018
24	3.868421	0.002615	-9.853485	-2.039564	-2.039564	0.000000	-3.414921
25	4.026316	0.002446	-9.495338	-2.496956	-2.496956	0.000000	-2.896811
26	4.184211	0.002291	-9.071483	-2.871882	-2.871882	0.000000	-2.374527
27	4.342105	0.002150	-8.594831	-3.165713	-3.165713	0.000000	-1.860938
28	4.500000	0.002022	-8.077942	-3.381541	-3.381541	0.000000	-1.366908
29	4.653846	0.001910	-7.546980	-3.520971	-3.520971	0.000000	-0.906296
30	4.807692	0.001808	-6.999536	-3.595794	-3.595794	0.000000	-0.486350
31	4.961538	0.001717	-6.445096	-3.611925	-3.611925	0.000000	-0.104852
32	5.115385	0.001635	-5.892195	-3.575789	-3.575789	0.000000	0.234883
33	5.269231	0.001562	-5.348357	-3.494104	-3.494104	0.000000	0.530953
34	5.423077	0.001497	-4.820065	-3.373696	-3.373696	0.000000	0.782653
35	5.576923	0.001438	-4.312756	-3.221324	-3.221324	0.000000	0.990419
36	5.730769	0.001386	-3.830843	-3.043543	-3.043543	0.000000	1.155578
37	5.884615	0.001340	-3.377756	-2.846581	-2.846581	0.000000	1.280254
38	6.038462	0.001299	-2.956000	-2.636250	-2.636250	0.000000	1.367144
39	6.192308	0.001262	-2.567222	-2.417867	-2.417867	0.000000	1.419491
40	6.346154	0.001228	-2.212293	-2.196212	-2.196212	0.000000	1.440759
41	6.500000	0.001198	-1.891393	-1.975488	-1.975488	0.000000	1.434707
42	6.663043	0.001169	-1.587954	-1.746690	-1.746690	0.000000	1.403299
43	6.826087	0.001143	-1.321112	-1.526569	-1.526569	0.000000	1.350071
44	6.989130	0.001119	-1.089218	-1.318008	-1.318008	0.000000	1.279178
45	7.152174	0.001097	-0.890205	-1.123212	-1.123212	0.000000	1.194745
46	7.315217	0.001076	-0.721702	-0.943754	-0.943754	0.000000	1.100679
47	7.478261	0.001057	-0.581127	-0.780635	-0.780635	0.000000	1.000460
48	7.641304	0.001038	-0.465776	-0.634345	-0.634345	0.000000	0.897248
49	7.804348	0.001020	-0.372900	-0.504930	-0.504930	0.000000	0.793743
50	7.967391	0.001003	-0.299776	-0.392060	-0.392060	0.000000	0.692271
51	8.130435	0.000986	-0.243757	-0.295097	-0.295097	0.000000	0.594704
52	8.293478	0.000970	-0.202324	-0.213154	-0.213154	0.000000	0.502585
53	8.456522	0.000954	-0.173114	-0.145161	-0.145161	0.000000	0.417022
54	8.619565	0.000938	-0.153949	-0.089919	-0.089919	0.000000	0.338819
55	8.782609	0.000923	-0.142857	-0.046147	-0.046147	0.000000	0.268467
56	8.945652	0.000908	-0.138074	-0.012528	-0.012528	0.000000	0.206197
57	9.108696	0.000893	-0.138051	0.012252	0.012252	0.000000	0.151984
58	9.271739	0.000878	-0.141453	0.029476	0.029476	0.000000	0.105641

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59	9.434783	0.000864	-0.147147	0.040368	0.040368	0.000000	0.066804
60	9.597826	0.000849	-0.154194	0.046075	0.046075	0.000000	0.035003
61	9.760870	0.000835	-0.161834	0.047651	0.047651	0.000000	0.009666
62	9.923913	0.000822	-0.169473	0.046048	0.046048	0.000000	-0.009832
63	10.086957	0.000808	-0.176659	0.042110	0.042110	0.000000	-0.024153
64	10.250000	0.000795	-0.183074	0.036571	0.036571	0.000000	-0.033973
65	10.413043	0.000782	-0.188505	0.030057	0.030057	0.000000	-0.039953
66	10.576087	0.000770	-0.192838	0.023086	0.023086	0.000000	-0.042755
67	10.739130	0.000757	-0.196030	0.016076	0.016076	0.000000	-0.042995
68	10.902174	0.000746	-0.198103	0.009348	0.009348	0.000000	-0.041265
69	11.065217	0.000734	-0.199120	0.003134	0.003134	0.000000	-0.038113
70	11.228261	0.000723	-0.199179	-0.002414	-0.002414	0.000000	-0.034028
71	11.391304	0.000712	-0.198394	-0.007219	-0.007219	0.000000	-0.029471
72	11.554348	0.000701	-0.196886	-0.011274	-0.011274	0.000000	-0.024871
73	11.717391	0.000691	-0.194774	-0.014630	-0.014630	0.000000	-0.020584
74	11.880435	0.000681	-0.192164	-0.017395	-0.017395	0.000000	-0.016959
75	12.043478	0.000671	-0.189138	-0.019726	-0.019726	0.000000	-0.014297
76	12.206522	0.000662	-0.185750	-0.021826	-0.021826	0.000000	-0.012880
77	12.369565	0.000653	-0.182020	-0.023937	-0.023937	0.000000	-0.012948
78	12.532609	0.000644	-0.177921	-0.026336	-0.026336	0.000000	-0.014714
79	12.695652	0.000636	-0.173383	-0.029332	-0.029332	0.000000	-0.018376
80	12.858696	0.000628	-0.168281	-0.033258	-0.033258	0.000000	-0.024079
81	13.021739	0.000620	-0.162434	-0.038464	-0.038464	0.000000	-0.031930
82	13.184783	0.000612	-0.155604	-0.045312	-0.045312	0.000000	-0.042001
83	13.347826	0.000605	-0.147495	-0.054162	-0.054162	0.000000	-0.054280
84	13.510870	0.000598	-0.137752	-0.065358	-0.065358	0.000000	-0.068669
85	13.673913	0.000591	-0.125966	-0.079215	-0.079215	0.000000	-0.084990
86	13.836957	0.000584	-0.111683	-0.095991	-0.095991	0.000000	-0.102892
87	14.000000	0.000578	-0.094412	-0.115863	-0.115863	0.000000	-0.121882
88	14.142857	0.000572	-0.079069	-0.098942	-0.098942	0.000000	0.118447
89	14.285714	0.000567	-0.065974	-0.084389	-0.084389	0.000000	0.101871
90	14.428571	0.000561	-0.054796	-0.072092	-0.072092	0.000000	0.086079
91	14.571429	0.000556	-0.045228	-0.061871	-0.061871	0.000000	0.071547
92	14.714286	0.000551	-0.036988	-0.053488	-0.053488	0.000000	0.058681
93	14.857143	0.000545	-0.029835	-0.046654	-0.046654	0.000000	0.047838
94	15.000000	0.000540	-0.023571	-0.041033	-0.041033	0.000000	0.039347
95	15.166667	0.000534	-0.017192	-0.035519	-0.035519	0.000000	0.033084
96	15.333333	0.000528	-0.011692	-0.030482	-0.030482	0.000000	0.030222
97	15.500000	0.000522	-0.007052	-0.025203	-0.025203	0.000000	0.031674
98	15.666667	0.000516	-0.003375	-0.018913	-0.018913	0.000000	0.037740
99	15.833333	0.000510	-0.000900	-0.010795	-0.010795	0.000000	0.048708
100	16.000000	0.002088	0.000000	0.000000	0.000000	0.000000	0.064770

Results after Step 2 :

i	z (m)	w (m)	M (kNm)	Q- (kN)	Q+ (kN)	F (kN)	f (kN/mm)
0	0.000000	0.085763	0.000000	0.000000	0.000000	0.000000	0.000000
1	0.166667	0.085272	-0.005556	0.066667	0.066667	0.000000	0.400001
2	0.333333	0.084782	-0.033333	0.266667	0.266667	0.000000	1.200005
3	0.500000	0.084292	-0.105556	0.600000	0.600000	0.000000	1.999994
4	0.666667	0.083802	-0.244444	1.066667	1.066667	0.000000	2.799996
5	0.833333	0.083312	-0.472222	1.666667	1.666667	0.000000	3.600014
6	1.000000	0.082824	-0.811111	2.400000	2.400000	0.000000	4.399989
7	1.166667	0.082337	-1.281250	3.241667	3.241667	0.000000	5.049992
8	1.333333	0.081852	-1.898611	4.166667	4.166667	0.000000	5.550022
9	1.500000	0.081370	-2.677083	5.175000	-32.058174	-37.233174	6.049986
10	1.657895	0.080916	2.303249	-31.026041	-31.026041	0.000000	6.536831
11	1.815789	0.080458	7.114709	-29.919116	-29.919116	0.000000	7.010558
12	1.973684	0.079989	11.745487	-28.737398	-28.737398	0.000000	7.484202
13	2.131579	0.079503	16.183772	-27.480888	-27.480888	0.000000	7.957883
14	2.289474	0.078991	20.417757	-26.149586	-26.149586	0.000000	8.431565
15	2.447368	0.078448	24.435632	-24.743492	-24.743492	0.000000	8.905304
16	2.605263	0.077868	28.225587	-23.262606	-23.262606	0.000000	9.378929
17	2.763158	0.077244	31.775813	-21.706927	-21.706927	0.000000	9.852617
18	2.921053	0.076571	35.074501	-20.076456	-20.076456	0.000000	10.326299
19	3.078947	0.075845	38.109842	-18.371193	-18.371193	0.000000	10.800049
20	3.236842	0.075059	40.870026	-16.591138	-16.591138	0.000000	11.273663
21	3.394737	0.074211	43.343244	-14.736290	-14.736290	0.000000	11.747351
22	3.552632	0.073297	45.517687	-12.806650	-12.806650	0.000000	12.221033
23	3.710526	0.072312	47.381545	-10.802218	-10.802218	0.000000	12.694795
24	3.868421	0.071254	48.923009	-8.722994	-8.722994	0.000000	13.168397
25	4.026316	0.070121	50.130270	-6.568977	-6.568977	0.000000	13.642085
26	4.184211	0.068911	50.991518	-4.340168	-4.340168	0.000000	14.115767
27	4.342105	0.067623	51.494945	-2.036567	-2.036567	0.000000	14.589541
28	4.500000	0.066255	51.628740	0.341826	0.341826	0.000000	15.063131
29	4.653846	0.064846	51.392355	2.731175	2.731175	0.000000	15.530784
30	4.807692	0.063362	50.782916	5.191530	5.191530	0.000000	15.992323
31	4.961538	0.061804	49.789499	7.722891	7.722891	0.000000	16.453863
32	5.115385	0.060173	48.401180	10.325258	10.325258	0.000000	16.915292
33	5.269231	0.058472	46.607035	12.998631	12.998631	0.000000	17.376942
34	5.423077	0.056702	44.396139	15.743010	15.743010	0.000000	17.838481
35	5.576923	0.054868	41.757570	18.558394	18.558394	0.000000	18.300014
36	5.730769	0.052973	38.680402	21.444785	21.444785	0.000000	18.761560

Students of Geotechnics, Example 2

37	5.884615	0.051021	35.153712	24.402181	24.402181	0.000000	19.223093
38	6.038462	0.049018	31.166577	27.430584	27.430584	0.000000	19.684511
39	6.192308	0.046970	26.708071	30.529992	30.529992	0.000000	20.146172
40	6.346154	0.044883	21.767271	33.700406	33.700406	0.000000	20.607712
41	6.500000	0.042764	16.333253	36.941826	36.941826	0.000000	21.069251
42	6.663043	0.040493	10.056274	40.055779	40.055779	0.000000	19.098968
43	6.826087	0.038205	3.330098	42.451987	42.451987	0.000000	14.696695
44	6.989130	0.035913	-3.728253	44.130449	44.130449	0.000000	10.294597
45	7.152174	0.033626	-11.001754	45.091165	45.091165	0.000000	5.892373
46	7.315217	0.031358	-18.373382	45.334135	45.334135	0.000000	1.490220
47	7.478261	0.029119	-25.726112	44.859359	44.859359	0.000000	-2.911950
48	7.641304	0.026923	-32.942922	43.666838	43.666838	0.000000	-7.314150
49	7.804348	0.024781	-39.906787	41.756571	41.756571	0.000000	-11.716267
50	7.967391	0.022705	-46.500683	39.128558	39.128558	0.000000	-16.118527
51	8.130435	0.020704	-52.607587	35.782800	35.782800	0.000000	-20.520583
52	8.293478	0.018790	-58.110476	31.719296	31.719296	0.000000	-24.922898
53	8.456522	0.016971	-62.892324	26.938046	26.938046	0.000000	-29.324906
54	8.619565	0.015255	-66.836109	21.439050	21.439050	0.000000	-33.727274
55	8.782609	0.013648	-69.839154	15.398300	15.398300	0.000000	-37.049815
56	8.945652	0.012156	-71.865577	9.459160	9.459160	0.000000	-36.426832
57	9.108696	0.010781	-72.935752	3.668320	3.668320	0.000000	-35.517038
58	9.271739	0.009526	-73.076523	-1.941533	-1.941533	0.000000	-34.407199
59	9.434783	0.008390	-72.318971	-7.351105	-7.351105	0.000000	-33.178602
60	9.597826	0.007373	-70.696301	-12.553649	-12.553649	0.000000	-31.909030
61	9.760870	0.006472	-68.241883	-17.553876	-17.553876	0.000000	-30.667961
62	9.923913	0.005682	-64.987492	-22.366657	-22.366657	0.000000	-29.518477
63	10.086957	0.004999	-60.961772	-27.015501	-27.015501	0.000000	-28.512819
64	10.250000	0.004416	-56.281224	-30.399228	-30.399228	0.000000	-20.753586
65	10.413043	0.003925	-51.163702	-32.375708	-32.375708	0.000000	-12.122446
66	10.576087	0.003518	-45.821074	-33.160523	-33.160523	0.000000	-4.813517
67	10.739130	0.003187	-40.430867	-32.959345	-32.959345	0.000000	1.233895
68	10.902174	0.002921	-35.138149	-31.964672	-31.964672	0.000000	6.100642
69	11.065217	0.002714	-30.057870	-30.353413	-30.353413	0.000000	9.882418
70	11.228261	0.002556	-25.277543	-28.285264	-28.285264	0.000000	12.684607
71	11.391304	0.002440	-20.860121	-25.901779	-25.901779	0.000000	14.618751
72	11.554348	0.002358	-16.846982	-23.326063	-23.326063	0.000000	15.797674
73	11.717391	0.002304	-13.260918	-20.662986	-20.662986	0.000000	16.333587
74	11.880435	0.002272	-10.109058	-17.999833	-17.999833	0.000000	16.333953
75	12.043478	0.002257	-7.385650	-15.407297	-15.407297	0.000000	15.900934
76	12.206522	0.002254	-5.074670	-12.940728	-12.940728	0.000000	15.128241
77	12.369565	0.002260	-3.152199	-10.641580	-10.641580	0.000000	14.101482
78	12.532609	0.002270	-1.588569	-8.538952	-8.538952	0.000000	12.896077
79	12.695652	0.002284	-0.350242	-6.651193	-6.651193	0.000000	11.578289
80	12.858696	0.002298	0.598565	-4.987506	-4.987506	0.000000	10.203914
81	13.021739	0.002312	1.294516	-3.549493	-3.549493	0.000000	8.819839
82	13.184783	0.002323	1.774037	-2.332633	-2.332633	0.000000	7.463384
83	13.347826	0.002332	2.072429	-1.327640	-1.327640	0.000000	6.163975
84	13.510870	0.002337	2.223189	-0.521687	-0.521687	0.000000	4.943163
85	13.673913	0.002339	2.257525	0.100508	0.100508	0.000000	3.816141
86	13.836957	0.002337	2.204025	0.555756	0.555756	0.000000	2.792179
87	14.000000	0.002331	2.088477	0.861631	0.861631	0.000000	1.876039
88	14.142857	0.002324	1.945318	1.142596	1.142596	0.000000	1.966757
89	14.285714	0.002313	1.768324	1.335324	1.335324	0.000000	1.349097
90	14.428571	0.002301	1.569305	1.450932	1.450932	0.000000	0.809257
91	14.571429	0.002287	1.358533	1.499886	1.499886	0.000000	0.342676
92	14.714286	0.002271	1.144837	1.491859	1.491859	0.000000	-0.056189
93	14.857143	0.002253	0.935730	1.435630	1.435630	0.000000	-0.393603
94	15.000000	0.002234	0.737540	1.339028	1.339028	0.000000	-0.676215
95	15.166667	0.002211	0.527248	1.184477	1.184477	0.000000	-0.927304
96	15.333333	0.002187	0.345750	0.993499	0.993499	0.000000	-1.145873
97	15.500000	0.002163	0.198476	0.773797	0.773797	0.000000	-1.318209
98	15.666667	0.002138	0.089687	0.531671	0.531671	0.000000	-1.452753
99	15.833333	0.002113	0.022690	0.272284	0.272284	0.000000	-1.556328
100	16.000000	0.002088	0.000000	0.000000	0.000000	0.000000	-1.633701

Results after Step 3 :

i	z (m)	w (m)	M (kNm)	Q- (kN)	Q+ (kN)	F (kN)	f (kN/mm)
0	0.000000	0.085763	0.000000	0.000000	0.000000	0.000000	0.000000
1	0.166667	0.085272	-0.005556	0.066667	0.066667	0.000000	0.400001
2	0.333333	0.084782	-0.033333	0.266667	0.266667	0.000000	1.200005
3	0.500000	0.084292	-0.105556	0.600000	0.600000	0.000000	1.999994
4	0.666667	0.083802	-0.244444	1.066667	1.066667	0.000000	2.799996
5	0.833333	0.083312	-0.472222	1.666667	1.666667	0.000000	3.600014
6	1.000000	0.082824	-0.811111	2.400000	2.400000	0.000000	4.399989
7	1.166667	0.082337	-1.281250	3.241667	3.241667	0.000000	5.049992
8	1.333333	0.081852	-1.898611	4.166667	4.166667	0.000000	5.550022
9	1.500000	0.081370	-2.677083	5.175000	-32.058174	-37.233174	6.049986
10	1.657895	0.080916	2.303249	-31.026041	-31.026041	0.000000	6.536831
11	1.815789	0.080458	7.114709	-29.919116	-29.919116	0.000000	7.010558
12	1.973684	0.079989	11.745487	-28.737398	-28.737398	0.000000	7.484202
13	2.131579	0.079503	16.183772	-27.480888	-27.480888	0.000000	7.957883
14	2.289474	0.078991	20.417757	-26.149586	-26.149586	0.000000	8.431565

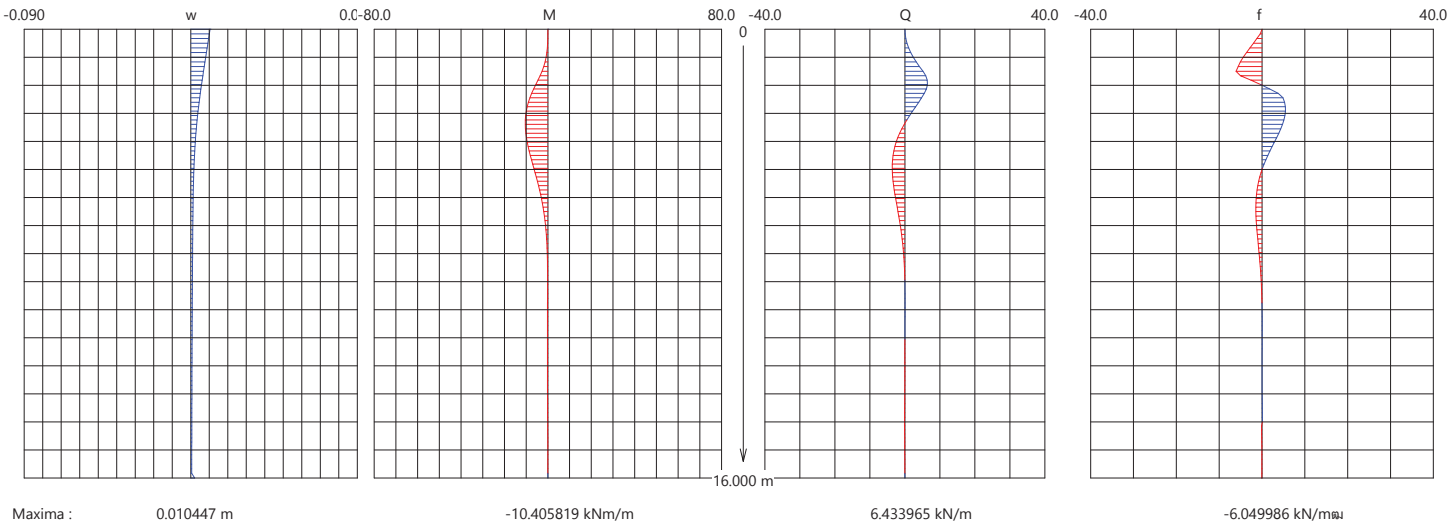
Students of Geotechnics, Example 2

15	2.447368	0.078448	24.435632	-24.743492	-24.743492	0.000000	8.905304
16	2.605263	0.077868	28.225587	-23.262606	-23.262606	0.000000	9.378929
17	2.763158	0.077244	31.775813	-21.706927	-21.706927	0.000000	9.852617
18	2.921053	0.076571	35.074501	-20.076456	-20.076456	0.000000	10.326299
19	3.078947	0.075845	38.109842	-18.371193	-18.371193	0.000000	10.800049
20	3.236842	0.075059	40.870026	-16.591138	-16.591138	0.000000	11.273663
21	3.394737	0.074211	43.343244	-14.736290	-14.736290	0.000000	11.747351
22	3.552632	0.073297	45.517687	-12.806650	-12.806650	0.000000	12.221033
23	3.710526	0.072312	47.381545	-10.802218	-10.802218	0.000000	12.694795
24	3.868421	0.071254	48.923009	-8.722994	-8.722994	0.000000	13.168397
25	4.026316	0.070121	50.130270	-6.568977	-6.568977	0.000000	13.642085
26	4.184211	0.068911	50.991518	-4.340168	-4.340168	0.000000	14.115767
27	4.342105	0.067623	51.494945	-2.036567	-2.036567	0.000000	14.589541
28	4.500000	0.066255	51.628740	0.341826	0.341826	0.000000	15.063131
29	4.653846	0.064846	51.392355	2.731175	2.731175	0.000000	15.530784
30	4.807692	0.063362	50.782916	5.191530	5.191530	0.000000	15.992323
31	4.961538	0.061804	49.789499	7.722891	7.722891	0.000000	16.453863
32	5.115385	0.060173	48.401180	10.325258	10.325258	0.000000	16.915292
33	5.269231	0.058472	46.607035	12.998631	12.998631	0.000000	17.376942
34	5.423077	0.056702	44.396139	15.743010	15.743010	0.000000	17.838481
35	5.576923	0.054868	41.757570	18.558394	18.558394	0.000000	18.300014
36	5.730769	0.052973	38.680402	21.444785	21.444785	0.000000	18.761560
37	5.884615	0.051021	35.153712	24.402181	24.402181	0.000000	19.223093
38	6.038462	0.049018	31.166577	27.430584	27.430584	0.000000	19.684511
39	6.192308	0.046970	26.708071	30.529992	30.529992	0.000000	20.146172
40	6.346154	0.044883	21.767271	33.700406	33.700406	0.000000	20.607712
41	6.500000	0.042764	16.333253	36.941826	36.941826	0.000000	21.069251
42	6.663043	0.040493	10.056274	40.055779	40.055779	0.000000	19.098968
43	6.826087	0.038205	3.330098	42.451987	42.451987	0.000000	14.696695
44	6.989130	0.035913	-3.728253	44.130449	44.130449	0.000000	10.294597
45	7.152174	0.033626	-11.001754	45.091165	45.091165	0.000000	5.892373
46	7.315217	0.031358	-18.373382	45.334135	45.334135	0.000000	1.490220
47	7.478261	0.029119	-25.726112	44.859359	44.859359	0.000000	-2.911950
48	7.641304	0.026923	-32.942922	43.666838	43.666838	0.000000	-7.314150
49	7.804348	0.024781	-39.906787	41.756571	41.756571	0.000000	-11.716267
50	7.967391	0.022705	-46.500683	39.128558	39.128558	0.000000	-16.118527
51	8.130435	0.020704	-52.607587	35.782800	35.782800	0.000000	-20.520583
52	8.293478	0.018790	-58.110476	31.719296	31.719296	0.000000	-24.922898
53	8.456522	0.016971	-62.892324	26.938046	26.938046	0.000000	-29.324906
54	8.619565	0.015255	-66.836109	21.439050	21.439050	0.000000	-33.727274
55	8.782609	0.013648	-69.839154	15.398300	15.398300	0.000000	-37.049815
56	8.945652	0.012156	-71.865577	9.459160	9.459160	0.000000	-36.426832
57	9.108696	0.010781	-72.935752	3.668320	3.668320	0.000000	-35.517038
58	9.271739	0.009526	-73.076523	-1.941533	-1.941533	0.000000	-34.407199
59	9.434783	0.008390	-72.318971	-7.351105	-7.351105	0.000000	-33.178602
60	9.597826	0.007373	-70.696301	-12.553649	-12.553649	0.000000	-31.909030
61	9.760870	0.006472	-68.241883	-17.553876	-17.553876	0.000000	-30.667961
62	9.923913	0.005682	-64.987492	-22.366657	-22.366657	0.000000	-29.518477
63	10.086957	0.004999	-60.961772	-27.015501	-27.015501	0.000000	-28.512819
64	10.250000	0.004416	-56.281224	-30.399228	-30.399228	0.000000	-20.753586
65	10.413043	0.003925	-51.163702	-32.375708	-32.375708	0.000000	-12.122446
66	10.576087	0.003518	-45.821074	-33.160523	-33.160523	0.000000	-4.813517
67	10.739130	0.003187	-40.430867	-32.959345	-32.959345	0.000000	1.233895
68	10.902174	0.002921	-35.138149	-31.964672	-31.964672	0.000000	6.100642
69	11.065217	0.002714	-30.057870	-30.353413	-30.353413	0.000000	9.882418
70	11.228261	0.002556	-25.277543	-28.285264	-28.285264	0.000000	12.684607
71	11.391304	0.002440	-20.860121	-25.901779	-25.901779	0.000000	14.618751
72	11.554348	0.002358	-16.846982	-23.326063	-23.326063	0.000000	15.797674
73	11.717391	0.002304	-13.260918	-20.662986	-20.662986	0.000000	16.333587
74	11.880435	0.002272	-10.109058	-17.999833	-17.999833	0.000000	16.333953
75	12.043478	0.002257	-7.385650	-15.407297	-15.407297	0.000000	15.900934
76	12.206522	0.002254	-5.074670	-12.940728	-12.940728	0.000000	15.128241
77	12.369565	0.002260	-3.152199	-10.641580	-10.641580	0.000000	14.101482
78	12.532609	0.002270	-1.588569	-8.538952	-8.538952	0.000000	12.896077
79	12.695652	0.002284	-0.350242	-6.651193	-6.651193	0.000000	11.578289
80	12.858696	0.002298	0.598565	-4.987506	-4.987506	0.000000	10.203914
81	13.021739	0.002312	1.294516	-3.549493	-3.549493	0.000000	8.819839
82	13.184783	0.002323	1.774037	-2.332633	-2.332633	0.000000	7.463384
83	13.347826	0.002332	2.072429	-1.327640	-1.327640	0.000000	6.163975
84	13.510870	0.002337	2.223189	-0.521687	-0.521687	0.000000	4.943163
85	13.673913	0.002339	2.257525	0.100508	0.100508	0.000000	3.816141
86	13.836957	0.002337	2.204025	0.555756	0.555756	0.000000	2.792179
87	14.000000	0.002331	2.088477	0.861631	0.861631	0.000000	1.876039
88	14.142857	0.002324	1.945318	1.142596	1.142596	0.000000	1.966757
89	14.285714	0.002313	1.768324	1.335324	1.335324	0.000000	1.349097
90	14.428571	0.002301	1.569305	1.450932	1.450932	0.000000	0.809257
91	14.571429	0.002287	1.358533	1.499886	1.499886	0.000000	0.342676
92	14.714286	0.002271	1.144837	1.491859	1.491859	0.000000	-0.056189
93	14.857143	0.002253	0.935730	1.435630	1.435630	0.000000	-0.393603
94	15.000000	0.002234	0.737540	1.339028	1.339028	0.000000	-0.676215
95	15.166667	0.002211	0.527248	1.184477	1.184477	0.000000	-0.927304
96	15.333333	0.002187	0.345750	0.993499	0.993499	0.000000	-1.145873
97	15.500000	0.002163	0.198476	0.773797	0.773797	0.000000	-1.318209
98	15.666667	0.002138	0.089687	0.531671	0.531671	0.000000	-1.452753

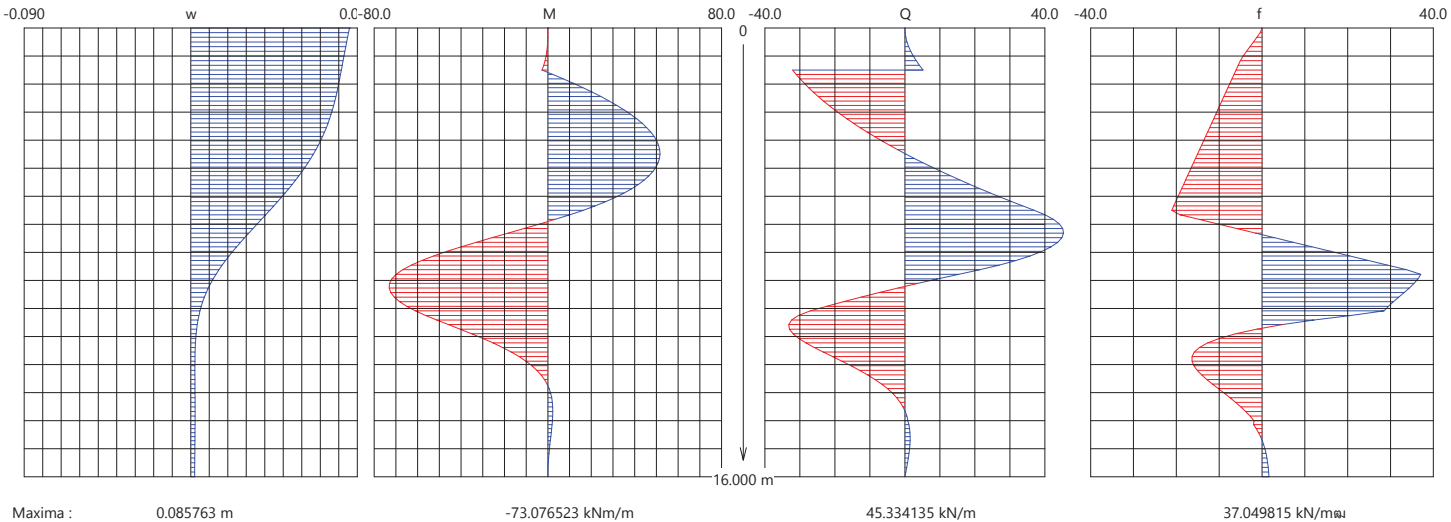
Students of Geotechnics, Example 2

99	15.833333	0.002113	0.022690	0.272284	0.272284	0.000000	-1.556328
100	16.000000	0.002088	0.000000	0.000000	0.000000	0.000000	-1.633701

Results after Step 1 :



Results after Step 2 :



Results after Step 3 :

