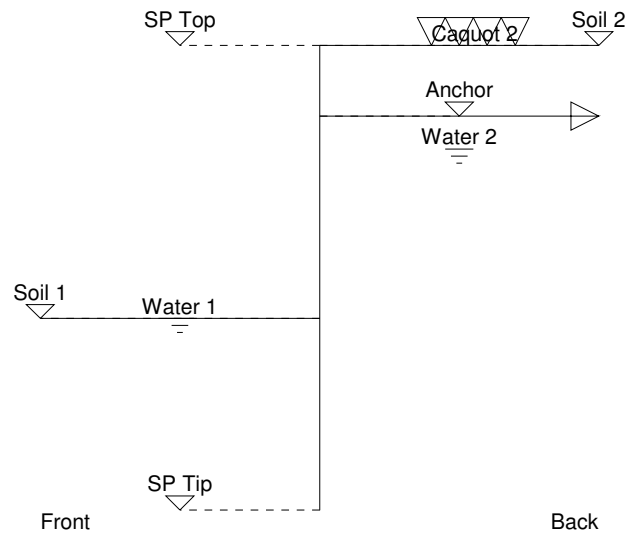


Sheet Pile Design According to Blum-Method

Project Name: Example
Date: 2005-10-26
Author: Marco Mascarin
Company:
Comment:

Geodata

	Unit
Sheet Pile Top Level [m]	0.000
Sheet Pile Tip Level [m]	9.870
Soil Level in Front [m]	5.800
Soil Level behind [m]	0.000
Anchorlevel [m]	1.500
Water Level in Front [m]	5.800
Water Level behind [m]	2.200
Soil Surface Inclination in Front [Deg]	0.000
Soil Surface Inclination behind [Deg]	0.000
Caquot Surcharge in Front [kN/m2]	0.000
Caquot Surcharge behind [kN/m2]	12.000
Anchor Inclination [Deg]	0.000
Earth Support	Free



Soil Layers

Layers in Front

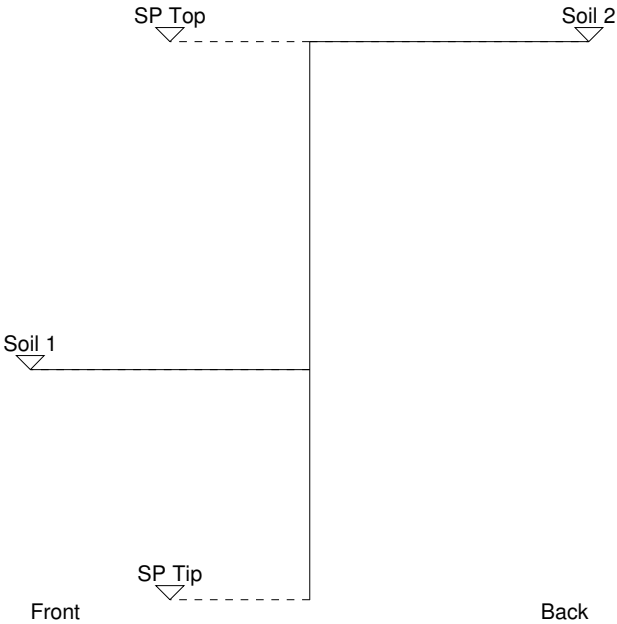
	Layer Tip [m]	Density Moist [kN/m3]	Density Submerged [kN/m3]	Kph	Phi [Deg]	Delta [Deg]	Cohesion [kN/m2]
Layer 1	7.000	19.600	10.000	3.394	33.000	0.000	0.000
Layer 2	30.000	20.100	10.300	3.690	35.000	0.000	0.000

Layers behind

	Layer Tip [m]	Density Moist [kN/m3]	Density Submerged [kN/m3]	Kph	Phi [Deg]	Delta [Deg]	Cohesion [kN/m2]
Layer 1	1.800	20.600	11.200	0.568	16.000	0.000	28.000
Layer 2	7.000	19.600	10.000	0.295	33.000	0.000	0.000
Layer 3	30.000	20.100	10.300	0.271	35.000	0.000	0.000

Boussinesq

	Distance Wall [m]	Width Surcharge [m]	Depth Surcharge [m]	Surcharge [kN/m2]

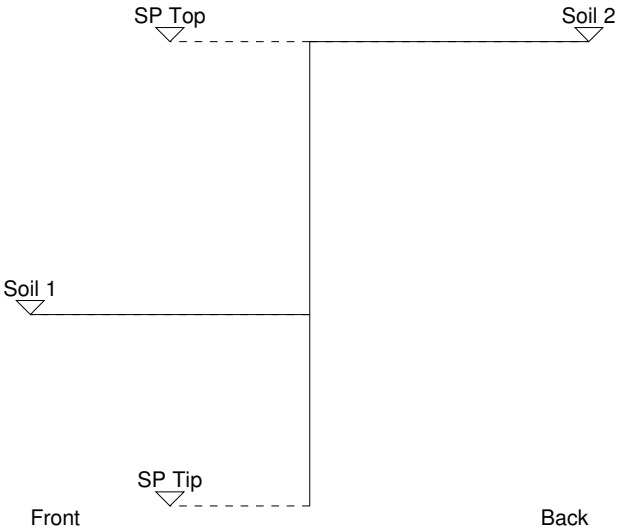


Userdefined Pressures

	Pressure Top [kN/m2]	Pressure Tip [kN/m2]	Depth Top [m]	Depth Tip [m]
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Concentrated Forces

	Horiz. Component [kN/m]	Vert. Component [kN/m]	Depth Horiz. Comp. [m]



Pile Section

Name	AZ28
Inertia [cm4/m]	58940.000
Modulus [cm3/m]	2755.000
Area [cm2/m]	211.100
Mass [kg/m2]	165.700
Steel Grade [N/mm2]	289.690
Requested Safety	1.500

All Values

Depth [m]	Deflection [m]	Rotation [Rad]	Cross Force [kN/m]	Moment [kNm/m]	Total Pressure [kN/m2]	Earth Pressure in Front [kN/m2]	behind [kN/m2]	Water Pressure [kN/m2]	Userdefined Pressure [kN/m2]
0.000	0.009	-0.006	0.000	0.000	0.000	0.000	-35.385	0.000	0.000
0.250	0.007	-0.006	0.000	0.000	0.000	0.000	-32.461	0.000	0.000
0.250	0.007	-0.006	0.000	0.000	0.000	0.000	-32.461	0.000	0.000
0.500	0.006	-0.006	0.000	0.000	0.000	0.000	-29.536	0.000	0.000
0.500	0.006	-0.006	0.000	0.000	0.000	0.000	-29.536	0.000	0.000
0.750	0.004	-0.006	0.000	0.000	0.000	0.000	-26.612	0.000	0.000
0.750	0.004	-0.006	0.000	0.000	0.000	0.000	-26.612	0.000	0.000
1.000	0.003	-0.006	0.000	0.000	0.000	0.000	-23.687	0.000	0.000
1.000	0.003	-0.006	0.000	0.000	0.000	0.000	-23.687	0.000	0.000
1.250	0.001	-0.006	0.000	0.000	0.000	0.000	-20.763	0.000	0.000
1.250	0.001	-0.006	0.000	0.000	0.000	0.000	-20.763	0.000	0.000
1.500	0.000	-0.006	0.000	0.000	0.000	0.000	-17.839	0.000	0.000
1.500	0.000	-0.006	-117.224	0.000	0.000	0.000	-17.839	0.000	0.000
1.750	-0.001	-0.006	-117.224	-29.306	0.000	0.000	-14.914	0.000	0.000
1.750	-0.001	-0.006	-117.224	-29.306	0.000	0.000	-14.914	0.000	0.000
1.800	-0.002	-0.006	-117.224	-35.167	0.000	0.000	-14.329	0.000	0.000
1.800	-0.002	-0.006	-117.224	-35.167	14.469	0.000	14.469	0.000	0.000
2.050	-0.003	-0.006	-113.427	-64.006	15.913	0.000	15.913	0.000	0.000
2.050	-0.003	-0.006	-113.427	-64.006	15.913	0.000	15.913	0.000	0.000
2.200	-0.004	-0.006	-110.975	-80.838	16.780	0.000	16.780	0.000	0.000
2.200	-0.004	-0.006	-110.975	-80.838	16.780	0.000	16.780	0.000	0.000
2.450	-0.005	-0.005	-106.375	-108.023	20.017	0.000	17.517	2.500	0.000
2.450	-0.005	-0.005	-106.375	-108.023	20.017	0.000	17.517	2.500	0.000
2.700	-0.007	-0.005	-100.966	-133.958	23.254	0.000	18.254	5.000	0.000
2.700	-0.007	-0.005	-100.966	-133.958	23.254	0.000	18.254	5.000	0.000
2.950	-0.008	-0.005	-94.748	-158.439	26.491	0.000	18.991	7.500	0.000
2.950	-0.008	-0.005	-94.748	-158.439	26.491	0.000	18.991	7.500	0.000
3.200	-0.009	-0.005	-87.720	-181.264	29.728	0.000	19.728	10.000	0.000
3.200	-0.009	-0.005	-87.720	-181.264	29.728	0.000	19.728	10.000	0.000
3.450	-0.010	-0.004	-79.884	-202.232	32.965	0.000	20.465	12.500	0.000
3.450	-0.010	-0.004	-79.884	-202.232	32.965	0.000	20.465	12.500	0.000
3.700	-0.011	-0.004	-71.238	-221.139	36.202	0.000	21.202	15.000	0.000
3.700	-0.011	-0.004	-71.238	-221.139	36.202	0.000	21.202	15.000	0.000
3.950	-0.012	-0.003	-61.783	-237.783	39.439	0.000	21.939	17.500	0.000
3.950	-0.012	-0.003	-61.783	-237.783	39.439	0.000	21.939	17.500	0.000
4.200	-0.013	-0.003	-51.518	-251.963	42.676	0.000	22.676	20.000	0.000
4.200	-0.013	-0.003	-51.518	-251.963	42.676	0.000	22.676	20.000	0.000
4.450	-0.014	-0.002	-40.445	-263.475	45.913	0.000	23.413	22.500	0.000
4.450	-0.014	-0.002	-40.445	-263.475	45.913	0.000	23.413	22.500	0.000
4.700	-0.014	-0.002	-28.562	-272.118	49.150	0.000	24.150	25.000	0.000
4.700	-0.014	-0.002	-28.562	-272.118	49.150	0.000	24.150	25.000	0.000
4.950	-0.014	-0.001	-15.870	-277.689	52.387	0.000	24.887	27.500	0.000
4.950	-0.014	-0.001	-15.870	-277.689	52.387	0.000	24.887	27.500	0.000
5.200	-0.015	-0.001	-2.368	-279.985	55.624	0.000	25.624	30.000	0.000
5.200	-0.015	-0.001	-2.368	-279.985	55.624	0.000	25.624	30.000	0.000
5.450	-0.015	0.000	11.942	-278.805	58.861	0.000	26.361	32.500	0.000
5.450	-0.015	0.000	11.942	-278.805	58.861	0.000	26.361	32.500	0.000
5.700	-0.015	0.000	27.062	-273.947	62.098	0.000	27.098	35.000	0.000
5.700	-0.015	0.000	27.062	-273.947	62.098	0.000	27.098	35.000	0.000
5.800	-0.015	0.001	33.337	-270.928	63.393	0.000	27.393	36.000	0.000
5.800	-0.015	0.001	33.337	-270.928	63.393	0.000	27.393	36.000	0.000
6.050	-0.014	0.001	48.217	-260.693	55.645	-8.485	28.130	36.000	0.000
6.050	-0.014	0.001	48.217	-260.693	55.645	-8.485	28.130	36.000	0.000
6.300	-0.014	0.002	61.159	-246.981	47.897	-16.970	28.867	36.000	0.000
6.300	-0.014	0.002	61.159	-246.981	47.897	-16.970	28.867	36.000	0.000
6.550	-0.014	0.002	72.165	-230.275	40.149	-25.455	29.604	36.000	0.000
6.550	-0.014	0.002	72.165	-230.275	40.149	-25.455	29.604	36.000	0.000
6.800	-0.013	0.003	81.234	-211.060	32.401	-33.940	30.341	36.000	0.000
6.800	-0.013	0.003	81.234	-211.060	32.401	-33.940	30.341	36.000	0.000
7.000	-0.012	0.003	87.094	-194.206	26.203	-40.728	30.931	36.000	0.000
7.000	-0.012	0.003	87.094	-194.206	20.152	-44.280	28.432	36.000	0.000
7.250	-0.012	0.003	91.032	-171.895	11.348	-53.782	29.130	36.000	0.000
7.250	-0.012	0.003	91.032	-171.895	11.348	-53.782	29.130	36.000	0.000
7.500	-0.011	0.004	92.768	-148.874	2.544	-63.283	29.828	36.000	0.000
7.500	-0.011	0.004	92.768	-148.874	2.544	-63.283	29.828	36.000	0.000
7.750	-0.010	0.004	92.304	-125.694	-6.260	-72.785	30.526	36.000	0.000

Depth [m]	Deflection [m]	Rotation [Rad]	Cross Force [kN/m]	Moment [kNm/m]	Total Pressure [kN/m2]	Earth Pressure in Front [kN/m2]	behind [kN/m2]	Water Pressure [kN/m2]	Userdefined Pressure [kN/m2]
7.750	-0.010	0.004	92.304	-125.694	-6.260	-72.785	30.526	36.000	0.000
8.000	-0.009	0.004	89.638	-102.905	-15.064	-82.287	31.223	36.000	0.000
8.000	-0.009	0.004	89.638	-102.905	-15.064	-82.287	31.223	36.000	0.000
8.250	-0.008	0.004	84.772	-81.058	-23.867	-91.789	31.921	36.000	0.000
8.250	-0.008	0.004	84.772	-81.058	-23.867	-91.789	31.921	36.000	0.000
8.500	-0.006	0.005	77.705	-60.703	-32.671	-101.291	32.619	36.000	0.000
8.500	-0.006	0.005	77.705	-60.703	-32.671	-101.291	32.619	36.000	0.000
8.750	-0.005	0.005	68.436	-42.389	-41.475	-110.792	33.317	36.000	0.000
8.750	-0.005	0.005	68.436	-42.389	-41.475	-110.792	33.317	36.000	0.000
9.000	-0.004	0.005	56.967	-26.668	-50.279	-120.294	34.015	36.000	0.000
9.000	-0.004	0.005	56.967	-26.668	-50.279	-120.294	34.015	36.000	0.000
9.250	-0.003	0.005	43.297	-14.089	-59.083	-129.796	34.712	36.000	0.000
9.250	-0.003	0.005	43.297	-14.089	-59.083	-129.796	34.712	36.000	0.000
9.500	-0.002	0.005	27.425	-5.203	-67.887	-139.298	35.410	36.000	0.000
9.500	-0.002	0.005	27.425	-5.203	-67.887	-139.298	35.410	36.000	0.000
9.750	-0.001	0.005	9.353	-0.560	-76.691	-148.799	36.108	36.000	0.000
9.750	-0.001	0.005	9.353	-0.560	-76.691	-148.799	36.108	36.000	0.000
9.870	0.000	0.005	-0.103	0.000	-80.917	-153.360	36.443	36.000	0.000

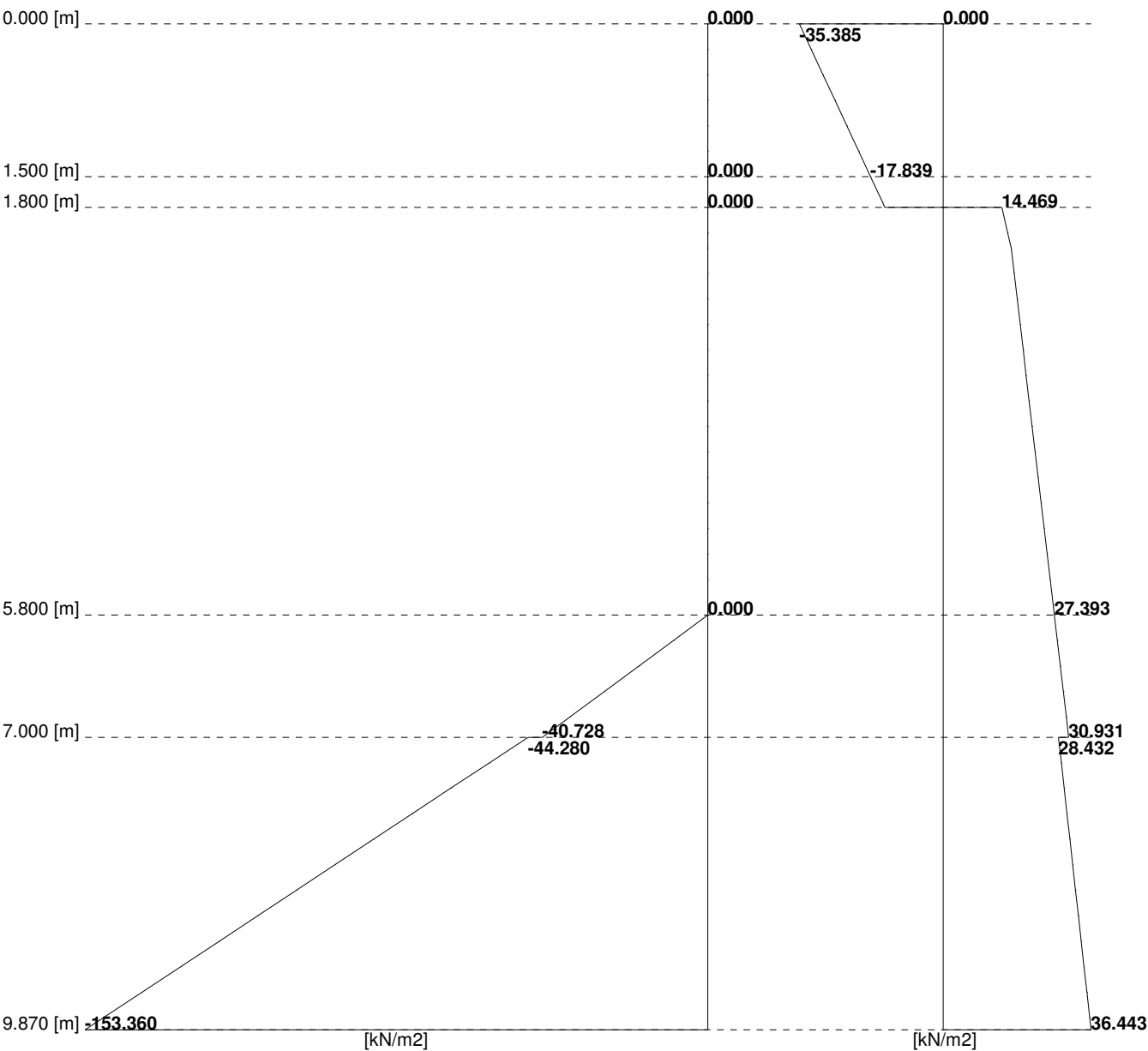
Extremal Values

	z Min [m]	Min	z Max [m]	Max
Deflection [m]	5.450	-0.015	0.000	0.009
Cross Force [kN/m]	1.750	-117.224	7.500	92.768
Moment [kNm/m]	5.200	-279.985	9.870	0.000

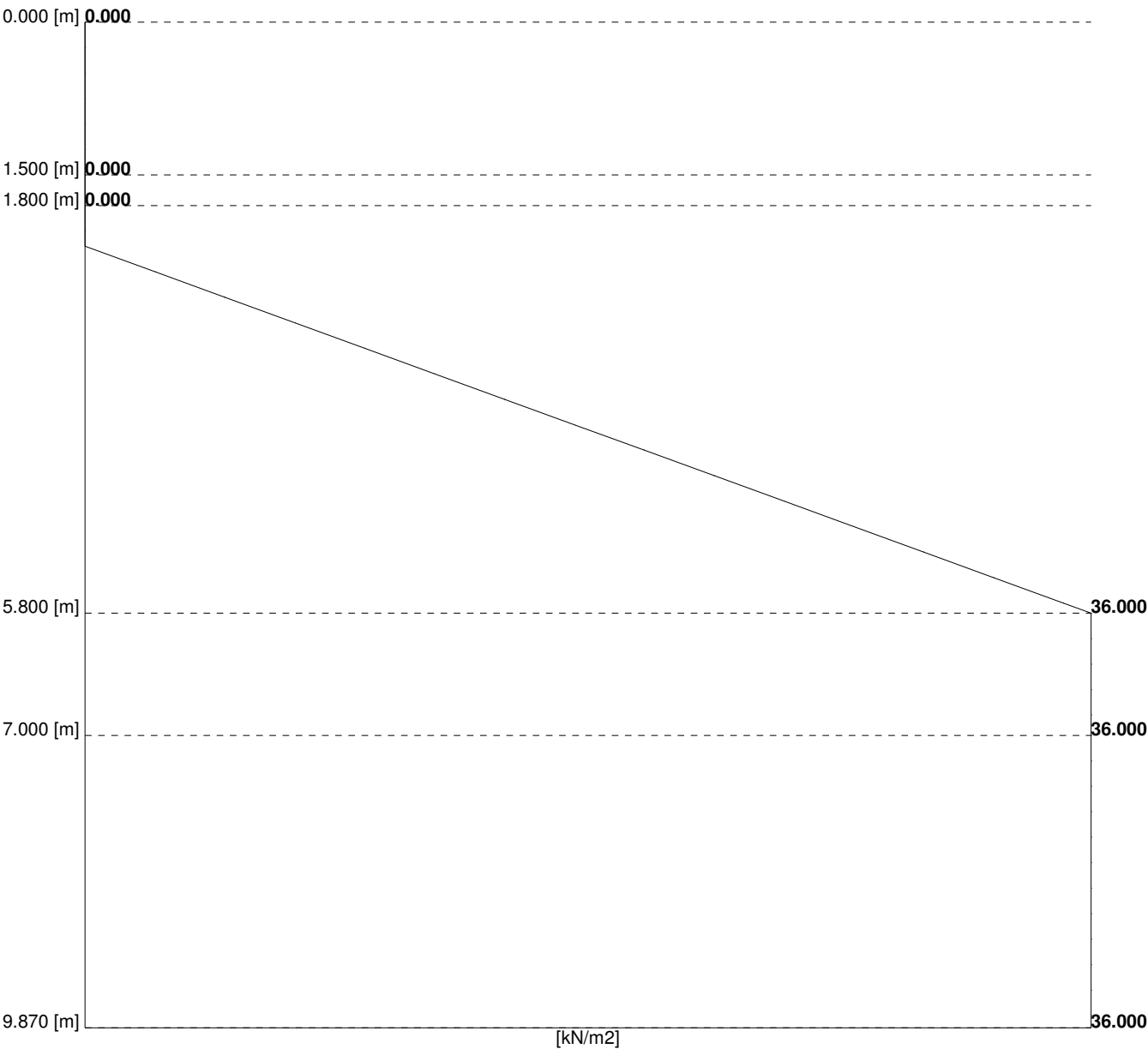
Pile Check

		Depth [m]
Name	AZ28	
Inertia [cm4/m]	58940.000	
Modulus [cm3/m]	2755.000	
Area [cm2/m]	211.100	
Mass [kg/m2]	165.700	
Steel Grade [N/mm2]	289.690	
Minimal Moment [kNm/m]	-279.985	5.200
Maxmimal Moment [kNm/m]	0.000	9.870
Normal Forces at Max. Moment [kN/m]	0.000	5.200
Normal Forces at Min. Moment [kN/m]	0.000	9.870
Deflection at Min. Moment [m]	-0.015	5.200
Deflection at Max. Moment [m]	0.000	9.870
Min. Stress at Min. Moment [N/mm2]	-101.628	5.200
Max. Stress at Min. Moment [N/mm2]	101.628	5.200
Min. Stress at Max. Moment [N/mm2]	0.000	9.870
Max. Stress at Max. Moment [N/mm2]	0.000	9.870
Safety > Req. Safety = 1.500	2.850	
Sheet Pile Top Level [m]	0.000	
Sheet Pile Tip Level [m]	9.870	
Sheet Pile Length [m]	9.870	
Included OverLength [m]	0.000	
Vertical Equilibrium [kN/m]	0.000	
Anchor Force (horiz.) [kN/m]	-117.224	

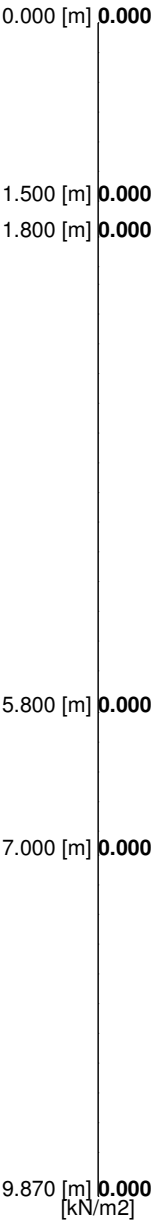
Earth Pressure Diagram



Water Pressure Diagram

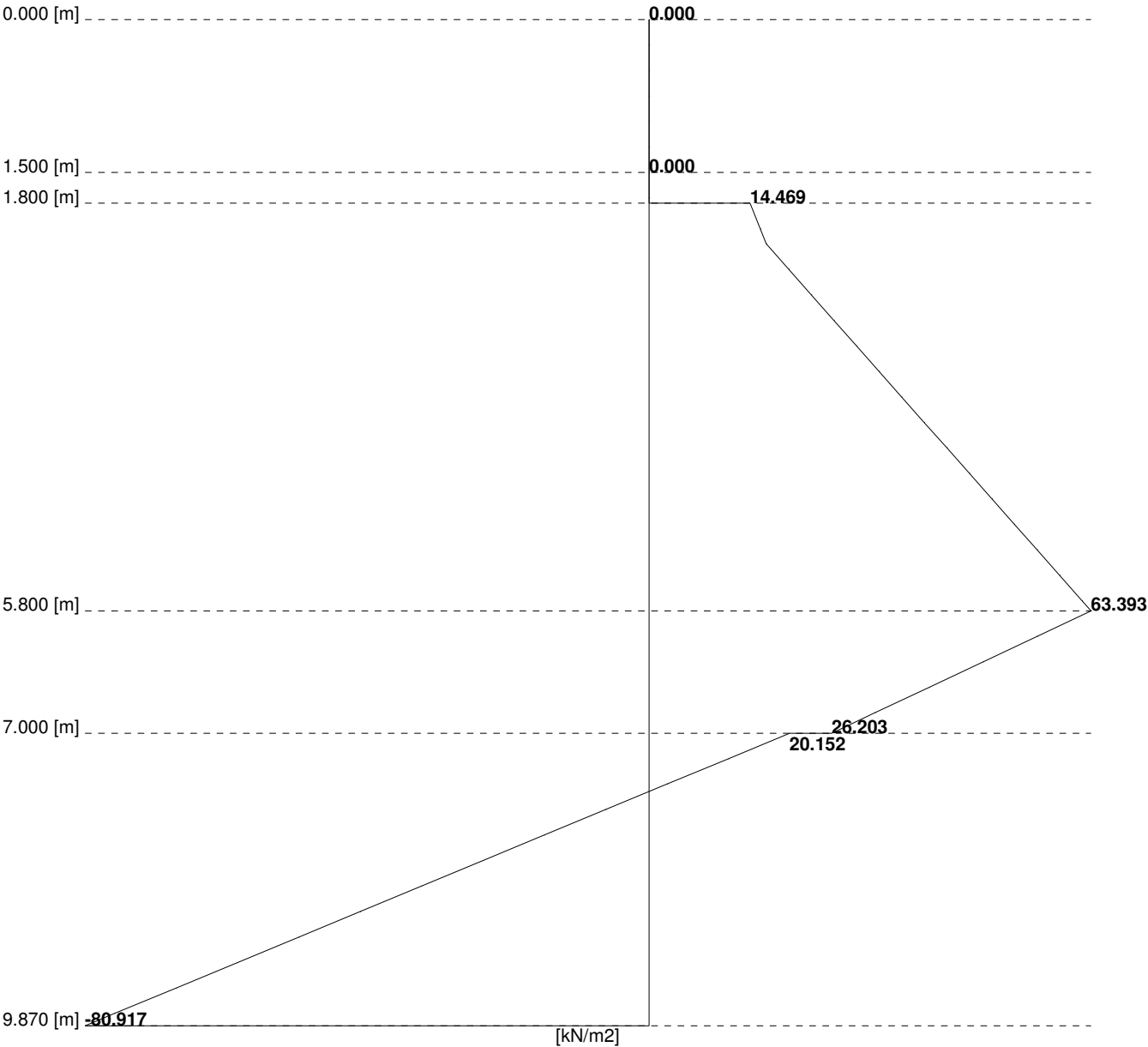


Userdefined Pressure Diagram

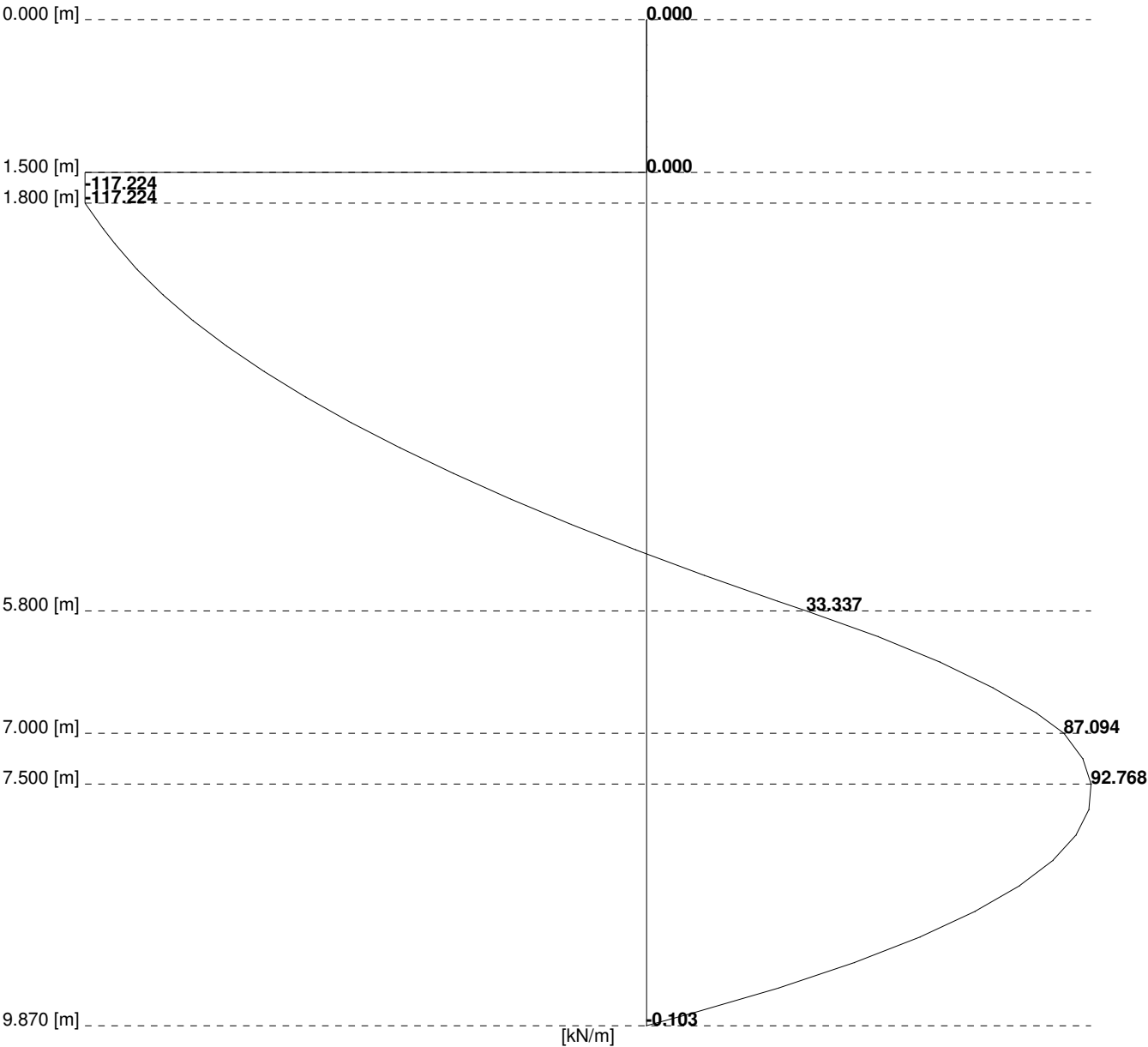


Boussinesq Diagram

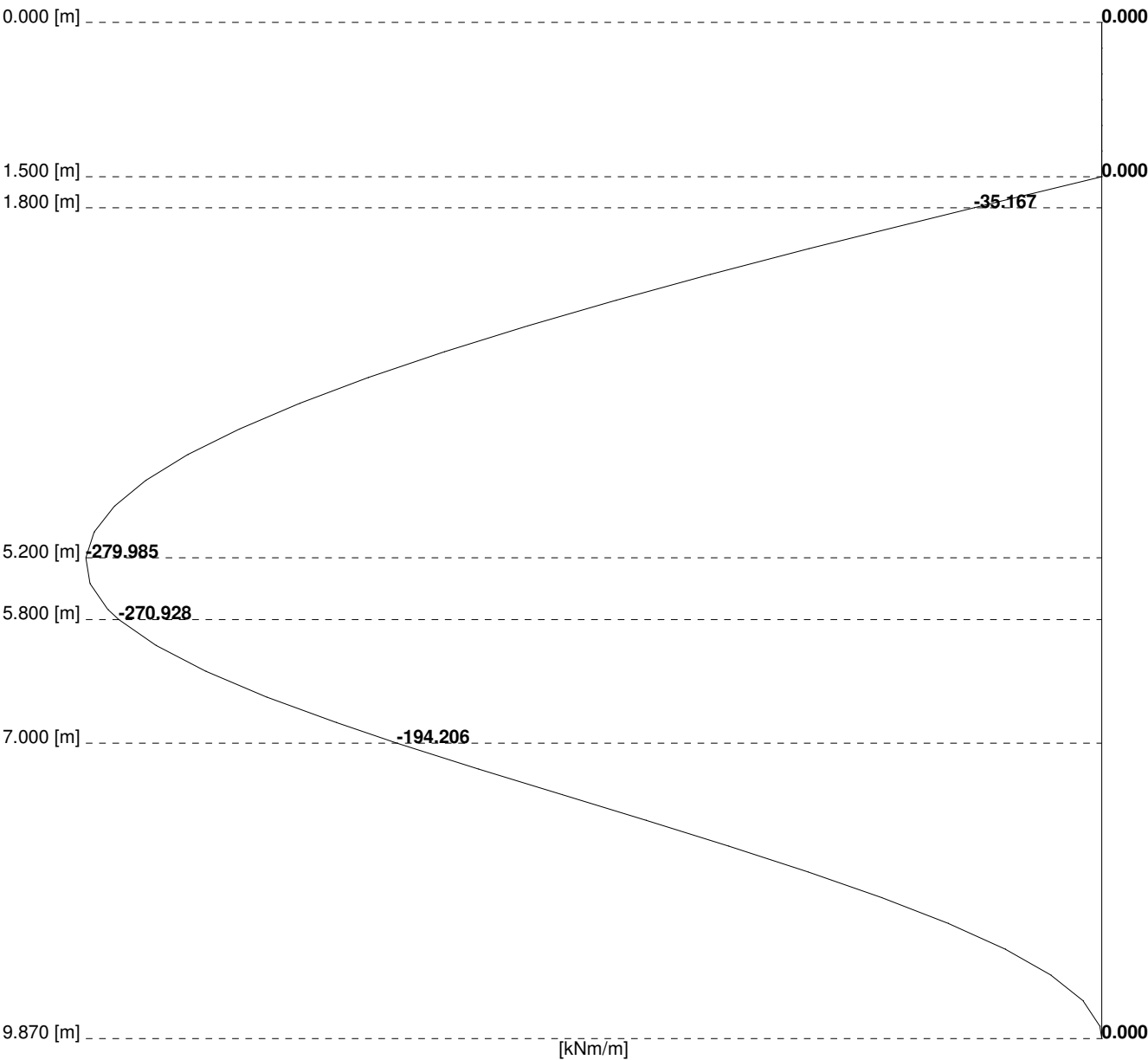
Total Pressure Diagram



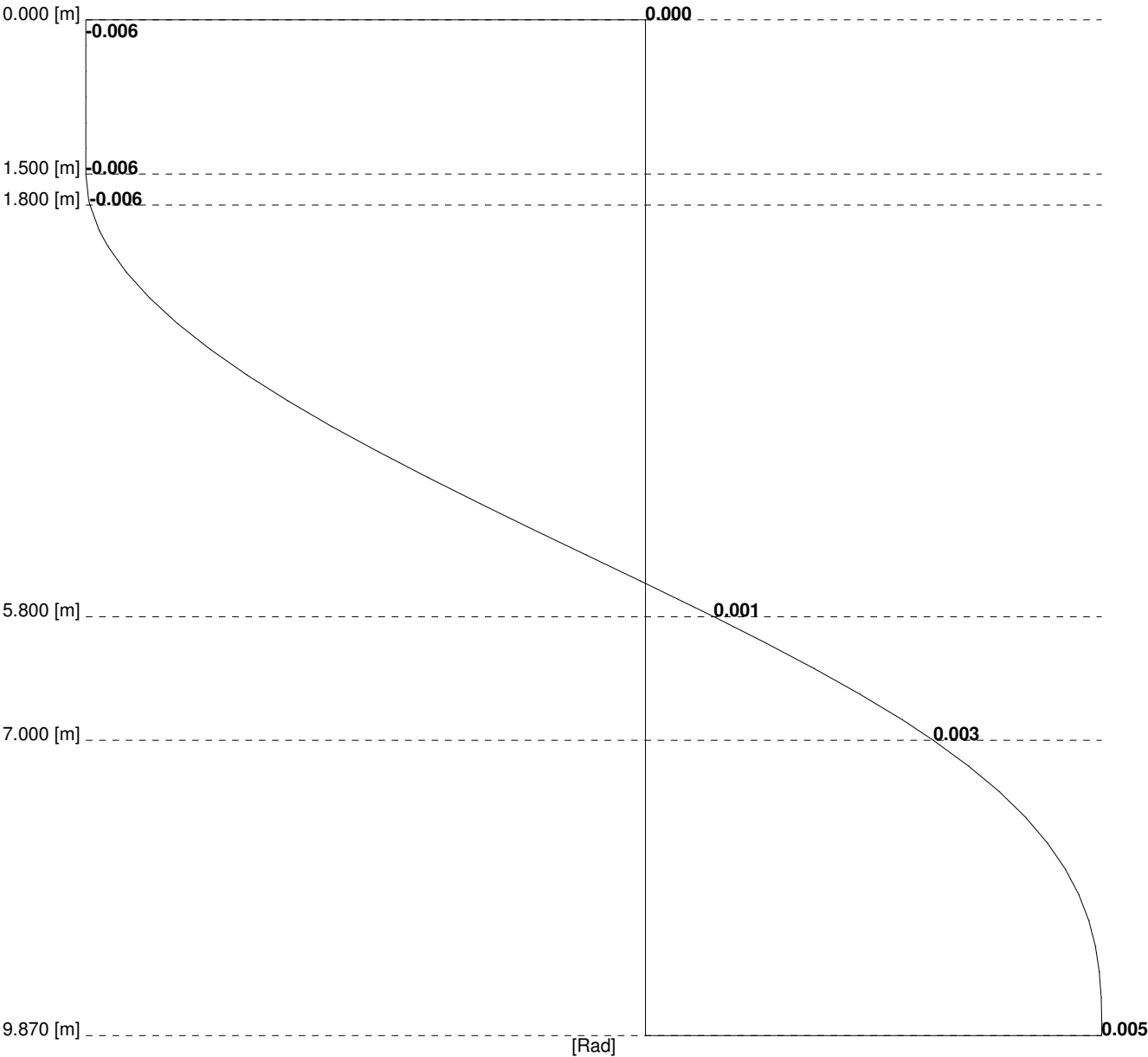
Cross Force Diagram



Moment Diagram



Rotation Diagram



Deflection Diagram

