

E78 GROSSETO - FANO
Tratto Nodo di Arezzo – Selci – Lama (E45)
Adeguamento a quattro corsie del tratto
San Zeno – Arezzo – Palazzo del Pero, 1° lotto

PROGETTO DEFINITIVO

FI 508

ANAS - DIREZIONE PROGETTAZIONE E REALIZZAZIONE LAVORI

<p>IL GEOLOGO</p> <p><i>Dott. Geol. Roberto Salucci</i></p> <p>Ordine dei geologi della Regione Lazio n. 633</p>	<p>I PROGETTISTI SPECIALISTICI</p> <p><i>Ing. Ambrogio Signorelli</i></p> <p>Ordine Ingegneri Provincia di Roma n. A35111</p>	<p>PROGETTAZIONE ATI: (Mandataria)</p> <p>GP INGENGNERIA <i>GESTIONE PROGETTI INGEGNERIA srl</i></p> <p>(Mandante)</p>
<p>COORDINATORE PER LA SICUREZZA IN FASE DI PROGETTAZIONE</p> <p><i>Arch. Santo Salvatore Vermiglio</i></p> <p>Ordine Architetti Provincia di Reggio Calabria n. 1270</p>	<p><i>Ing. Moreno Panfili</i></p> <p>Ordine Ingegneri Provincia di Perugia n. A2687</p> <p><i>Ing. Matteo Bordugo</i></p> <p>Ordine Ingegneri Provincia di Pordenone n. 750A</p>	<p>(Mandante)</p> <p>cooprogetti</p> <p>engeko</p> <p>AIM <i>Studio di Architettura e Ingegneria Moderna</i></p>
<p>VISTO: IL RESP. DEL PROCEDIMENTO</p> <p><i>Ing. Francesco Pisani</i></p>	<p><i>Ing. Giuseppe Festa</i></p> <p>Ordine Ingegneri Provincia di Roma n. 20629</p>	<p>(Mandante)</p> <p>IL PROGETTISTA RESPONSABILE DELL'INTEGRAZIONE DELLE PRESTAZIONI SPECIALISTICHE. (DPR207/10 ART 15 COMMA 12):</p>
<p>VISTO: IL RESP. DEL PROGETTO</p> <p><i>Arch. Pianif. Marco Colazza</i></p>		<p>Dott. Ing. GIORGIO GUIDUCCI ORDINE INGEGNERI ROMA N° 14035</p>

STUDI ED INDAGINI
Geotecnica

Relazione sulle aree in frana e sugli interventi stabilizzazione: Tabulati di calcolo

<p>CODICE PROGETTO</p> <p>PROGETTO LIV.PROG ANNO</p>	<p>NOME FILE</p> <p>T01GE00GETRE04_A</p>	<p>REVISIONE</p>	<p>SCALA</p>
<p>DPFI508 D 23</p>	<p>CODICE ELAB. T01GE00GETRE04</p>	<p>A</p>	<p>-</p>
<p>D</p>			
<p>C</p>			
<p>B</p>			
<p>A</p>	<p>Emissione a seguito Istruttoria n°U. 0016028.09-01-2024</p>	<p>Gennaio '24</p>	<p>Colleselli Bordugo Guiducci</p>
<p>REV.</p>	<p>DESCRIZIONE</p>	<p>DATA</p>	<p>REDATTO VERIFICATO APPROVATO</p>

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PROGETTAZIONE ATI:



2+970 sisma

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

2+970 sisma

Project Summary

File Name:	2+970 sisma.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.591s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Left to Right

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	M1+R2 fronti scavo sisma	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1	
Variable Actions: Favourable	1	
Effective cohesion	1	
Coefficient of shearing resistance	1	
Undrained strength	1	
Weight density	1	
Shear strength (other models)	1	
Earth resistance	1.2	
Tensile and plate strength	1	
Shear strength	1	
Compressive strength	1	
Bond strength	1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth [m]:	3
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.091
Seismic Load Coefficient (Vertical):	0.045





Loading

1 Distributed Load present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	6
Orientation:	Normal to boundary
Load Action:	Live

Materials


AC	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	23
Cohesion [kPa]	100
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1
AC alt	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1
R	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	20
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1
FN	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19
Cohesion [kPa]	0
Friction Angle [deg]	23
Water Surface	Water Table
Hu Value	1

Support




pali

Color	
Type	Pile/Micro Pile
Force Application	Passive (Method B)
Force Orientation	Parallel to surface
Out-Of-Plane Spacing	0.6 m
Failure Mode	Shear
Pile Shear Strength	255 kN

Ancoraggio

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	1.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	50 kN/m
Material Dependent	Yes

Bond Strength Dependency

	Material	Bond Strength [kN/m]
	AC alt	78.5
	R	26.2
	FN	15.7

Global Minimums

Method: bishop simplified

	FS	1.011580
Center:		228.268, 408.856
Radius:		332.908
Left Slip Surface Endpoint:		58.446, 122.521
Right Slip Surface Endpoint:		222.411, 76.000
Resisting Moment:		2.06667e+06 kN-m
Driving Moment:		2.04302e+06 kN-m
Passive Support Moment:		200330 kN-m
Maximum Single Support Force:		666.667 kN
Total Support Force:		1091.67 kN
Total Slice Area:		871.57 m ²
Surface Horizontal Width:		163.965 m
Surface Average Height:		5.31558 m

Method: janbu simplified

	FS	1.027610
Center:		228.268, 408.856
Radius:		332.908
Left Slip Surface Endpoint:		58.446, 122.521
Right Slip Surface Endpoint:		222.411, 76.000
Resisting Horizontal Force:		6188 kN
Driving Horizontal Force:		6021.76 kN
Passive Horizontal Support Force:		842.317 kN
Maximum Single Support Force:		666.667 kN
Total Support Force:		1091.67 kN
Total Slice Area:		871.57 m ²
Surface Horizontal Width:		163.965 m
Surface Average Height:		5.31558 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
62.5624, 120.164	25	0.0359026	24.9641	0.0359026	24.9641	666.667
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
62.5624, 120.164	18	0.0398495	17.9602	0.0398495	17.9602	425

Method: janbu simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
62.5624, 120.164	25	0.0359026	24.9641	0.0359026	24.9641	666.667
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
62.5624, 120.164	18	0.0398495	17.9602	0.0398495	17.9602	425

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	7495
Number of Invalid Surfaces:	3

Error Codes

Error Code -112 reported for 3 surfaces

Method: janbu simplified

Number of Valid Surfaces:	7497
Number of Invalid Surfaces:	1

Error Codes

Error Code -112 reported for 1 surface

Error Code Descriptions

The following errors were encountered during the computation:

-112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi)/F) < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.01158

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	3.10246	14.2512	-30.3622	R	0	35	1.9696	1.99241	3.41456	0	3.41456	4.56837	4.56837
2	3.10246	26.4488	-29.7453	R	0	35	37.7626	38.1999	65.4661	0	65.4661	87.045	87.045
3	0.0556289	1.28416	-29.4323	AC alt	50	30	39.8276	40.2888	-2.86389	0	-2.86389	19.6074	19.6074
4	3.30717	121.379	-29.1011	FN	2	21.5	11.5812	11.7153	30.6119	0	30.6119	37.0582	37.0582
5	3.30717	205.565	-28.4517	FN	2	21.5	18.7631	18.9804	52.7441	0	52.7441	62.9112	62.9112
6	3.30717	314.851	-27.8062	FN	2	21.5	28.1463	28.4723	81.6599	0	81.6599	96.5037	96.5037
7	3.30717	422.76	-27.1646	FN	2	21.5	37.497	37.9312	110.476	0	110.476	129.717	129.717
8	3.30717	485.343	-26.5267	FN	2	21.5	43.0401	43.5385	127.557	0	127.557	149.041	149.041
9	3.30717	489.326	-25.8922	FN	2	21.5	43.5775	44.0822	129.214	0	129.214	150.367	150.367
10	3.30717	445.484	-25.2612	FN	2	21.5	39.9747	40.4376	118.111	0	118.111	136.974	136.974
11	3.30717	403.416	-24.6334	FN	2	21.5	36.4913	36.9139	107.376	0	107.376	124.109	124.109
12	3.30717	361.305	-24.0088	FN	2	21.5	32.9711	33.3529	96.5282	0	96.5282	111.214	111.214
13	3.30717	314.977	-23.3872	FN	2	21.5	29.0483	29.3847	84.4393	0	84.4393	97.0019	97.0019
14	3.30717	290.552	-22.7684	FN	2	21.5	27.0201	27.333	78.1891	0	78.1891	89.5298	89.5298
15	3.30717	245.52	-22.1525	FN	2	21.5	23.1493	23.4174	66.2609	0	66.2609	75.6856	75.6856
16	3.30717	257.449	-21.5393	FN	2	21.5	24.3065	24.588	69.827	0	69.827	79.4209	79.4209
17	3.30717	292.158	-20.9286	FN	2	21.5	27.505	27.8235	79.6836	0	79.6836	90.2025	90.2025
18	3.30717	332.291	-20.3204	FN	2	21.5	31.2145	31.576	91.1152	0	91.1152	102.674	102.674
19	3.30717	372.6	-19.7147	FN	2	21.5	34.9691	35.3741	102.685	0	102.685	115.216	115.216
20	3.30717	406.134	-19.1111	FN	2	21.5	38.1406	38.5823	112.459	0	112.459	125.675	125.675
21	3.30717	398.957	-18.5098	FN	2	21.5	37.6437	38.0796	110.928	0	110.928	123.53	123.53
22	3.36079	402.786	-17.9058	FN	2	21.5	37.0861	37.5156	110.851	1.64193	109.209	122.834	121.192
23	3.36079	419.095	-17.2989	FN	2	21.5	37.9312	38.3705	116.126	4.31209	111.813	127.939	123.627
24	3.36079	439.148	-16.6941	FN	2	21.5	39.374	39.83	122.367	6.10709	116.26	134.175	128.068
25	3.36079	466.822	-16.0912	FN	2	21.5	41.6287	42.1108	130.732	7.52332	123.208	142.74	135.217
26	3.36079	489.979	-15.49	FN	2	21.5	43.6047	44.1097	137.841	8.5431	129.298	149.925	141.382
27	3.36079	481.395	-14.8907	FN	2	21.5	42.8415	43.3376	136.004	9.05825	126.945	147.395	138.337
28	3.36079	484.302	-14.293	FN	2	21.5	43.2342	43.7349	137.36	9.20461	128.155	148.375	139.17
29	3.36079	493.831	-13.6968	FN	2	21.5	44.3474	44.861	140.571	8.98519	131.586	151.379	142.394
30	3.36079	490.169	-13.1022	FN	2	21.5	44.2631	44.7757	140.04	8.7139	131.326	150.342	141.628
31	3.36079	489.728	-12.5091	FN	2	21.5	44.4308	44.9453	140.437	8.59414	131.843	150.295	141.701
32	3.36079	495.544	-11.9172	FN	2	21.5	45.2892	45.8137	142.605	8.11666	134.488	152.163	144.046
33	3.36079	492.929	-11.3267	FN	2	21.5	45.3129	45.8377	142.371	7.80915	134.562	151.447	143.638
34	3.36079	475.627	-10.7374	FN	2	21.5	43.7912	44.2983	137.918	8.04622	129.872	146.222	138.176
35	3.36079	456.082	-10.1492	FN	2	21.5	42.1516	42.6397	132.752	7.93232	124.819	140.297	132.365
36	3.36079	444.593	-9.56213	FN	2	21.5	41.3645	41.8435	129.873	7.47905	122.394	136.841	129.362
37	3.36079	428.006	-8.97605	FN	2	21.5	40.1871	40.6525	125.46	6.6949	118.765	131.808	125.113
38	3.36079	402.297	-8.39092	FN	2	21.5	38.2355	38.6783	118.317	5.56535	112.751	123.957	118.391
39	3.36079	385.44	-7.80667	FN	2	21.5	37.3289	37.7612	113.702	3.7444	109.958	118.82	115.075
40	3.36079	357.671	-7.22323	FN	2	21.5	35.5569	35.9687	105.802	1.30484	104.497	110.308	109.003
41	3.43206	327.658	-6.63437	FN	2	21.5	32.5464	32.9233	95.2194	0	95.2194	99.005	99.005
42	3.43206	287.225	-6.04005	FN	2	21.5	28.8375	29.1715	83.7901	0	83.7901	86.8414	86.8414
43	3.43206	255.968	-5.44638	FN	2	21.5	25.9733	26.2741	74.9635	0	74.9635	77.4399	77.4399
44	3.43206	224.81	-4.85329	FN	2	21.5	23.0956	23.3631	66.0952	0	66.0952	68.0562	68.0562
45	3.43206	190.592	-4.26072	FN	2	21.5	19.9011	20.1316	56.251	0	56.251	57.7337	57.7337
46	3.43206	152.917	-3.66862	FN	2	21.5	16.3481	16.5374	45.3016	0	45.3016	46.3498	46.3498
47	3.43206	123.319	-3.0769	FN	2	21.5	13.5483	13.7052	36.6737	0	36.6737	37.4019	37.4019
48	3.43206	105.768	-2.48551	FN	2	21.5	11.8967	12.0345	31.5842	0	31.5842	32.1006	32.1006
49	3.43206	71.1907	-1.89439	FN	2	21.5	8.57109	8.67034	21.3358	0	21.3358	21.6193	21.6193
50	3.43206	27.2427	-1.30456	FN	2	21.5	4.30112	4.35093	8.17728	0	8.17728	8.27523	8.27523

Global Minimum Query (janbu simplified) - Safety Factor: 1.02761

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	3.10246	14.2512	-30.3622	R	0	35	1.94819	2.00198	3.43094	0	3.43094	4.57221	4.57221
2	3.10246	26.4488	-29.7453	R	0	35	36.791	37.8068	64.7924	0	64.7924	85.8162	85.8162
3	0.0556289	1.28416	-29.4323	AC alt	50	30	39.3651	40.452	-2.52473	0	-2.52473	19.6856	19.6856
4	3.30717	121.379	-29.1011	FN	2	21.5	11.4343	11.75	30.7176	0	30.7176	37.0821	37.0821
5	3.30717	205.565	-28.4517	FN	2	21.5	18.5239	19.0354	52.9113	0	52.9113	62.9488	62.9488
6	3.30717	314.851	-27.8062	FN	2	21.5	27.7857	28.5529	81.9055	0	81.9055	96.5591	96.5591
7	3.30717	422.76	-27.1646	FN	2	21.5	37.0142	38.0362	110.795	0	110.795	129.789	129.789
8	3.30717	485.343	-26.5267	FN	2	21.5	42.4832	43.6562	127.916	0	127.916	149.122	149.122
9	3.30717	489.326	-25.8922	FN	2	21.5	43.011	44.1986	129.568	0	129.568	150.446	150.446
10	3.30717	445.484	-25.2612	FN	2	21.5	39.4525	40.5418	118.428	0	118.428	137.045	137.045
11	3.30717	403.416	-24.6334	FN	2	21.5	36.0124	37.0067	107.659	0	107.659	124.172	124.172
12	3.30717	361.305	-24.0088	FN	2	21.5	32.5364	33.4348	96.7777	0	96.7777	111.27	111.27
13	3.30717	314.977	-23.3872	FN	2	21.5	28.6636	29.455	84.6536	0	84.6536	97.0498	97.0498
14	3.30717	290.552	-22.7684	FN	2	21.5	26.6606	27.3967	78.3834	0	78.3834	89.5732	89.5732
15	3.30717	245.52	-22.1525	FN	2	21.5	22.84	23.4706	66.4228	0	66.4228	75.7215	75.7215
16	3.30717	257.449	-21.5393	FN	2	21.5	23.9803	24.6424	69.9927	0	69.9927	79.4578	79.4578
17	3.30717	292.158	-20.9286	FN	2	21.5	27.1342	27.8834	79.8658	0	79.8658	90.2429	90.2429
18	3.30717	332.291	-20.3204	FN	2	21.5	30.7919	31.6421	91.3165	0	91.3165	102.719	102.719
19	3.30717	372.6	-19.7147	FN	2	21.5	34.4936	35.446	102.904	0	102.904	115.265	115.265
20	3.30717	406.134	-19.1111	FN	2	21.5	37.6198	38.6585	112.691	0	112.691	125.726	125.726
21	3.30717	398.957	-18.5098	FN	2	21.5	37.1274	38.1525	111.15	0	111.15	123.579	123.579
22	3.36079	402.786	-17.9058	FN	2	21.5	36.5752	37.5851	111.063	1.64193	109.421	122.881	121.239
23	3.36079	419.095	-17.2989	FN	2	21.5	37.4065	38.4393	116.335	4.31209	112.023	127.986	123.673
24	3.36079	439.148	-16.6941	FN	2	21.5	38.8271	39.8991	122.577	6.10709	116.47	134.222	128.114
25	3.36079	466.822	-16.0912	FN	2	21.5	41.048	42.1814	130.946	7.52332	123.423	142.787	135.264
26	3.36079	489.979	-15.49	FN	2	21.5	42.9939	44.181	138.058	8.5431	129.515	149.973	141.43
27	3.36079	481.395	-14.8907	FN	2	21.5	42.2388	43.405	136.209	9.05825	127.151	147.44	138.382
28	3.36079	484.302	-14.293	FN	2	21.5	42.6235	43.8004	137.56	9.20461	128.355	148.419	139.214
29	3.36079	493.831	-13.6968	FN	2	21.5	43.7184	44.9255	140.768	8.98519	131.783	151.423	142.437
30	3.36079	490.169	-13.1022	FN	2	21.5	43.6327	44.8374	140.228	8.7139	131.514	150.384	141.67
31	3.36079	489.728	-12.5091	FN	2	21.5	43.7954	45.0046	140.618	8.59414	132.024	150.334	141.74
32	3.36079	495.544	-11.9172	FN	2	21.5	44.6389	45.8714	142.781	8.11666	134.664	152.202	144.085
33	3.36079	492.929	-11.3267	FN	2	21.5	44.6596	45.8927	142.538	7.80915	134.729	151.484	143.675
34	3.36079	475.627	-10.7374	FN	2	21.5	43.1572	44.3488	138.072	8.04622	130.026	146.256	138.21
35	3.36079	456.082	-10.1492	FN	2	21.5	41.5389	42.6858	132.892	7.93232	124.96	140.328	132.396
36	3.36079	444.593	-9.56213	FN	2	21.5	40.7608	41.8862	130.003	7.47905	122.524	136.869	129.39
37	3.36079	428.006	-8.97605	FN	2	21.5	39.5982	40.6915	125.579	6.6949	118.884	131.834	125.139
38	3.36079	402.297	-8.39092	FN	2	21.5	37.6729	38.7131	118.423	5.56535	112.857	123.98	118.414
39	3.36079	385.44	-7.80667	FN	2	21.5	36.7775	37.793	113.799	3.7444	110.054	118.841	115.097
40	3.36079	357.671	-7.22323	FN	2	21.5	35.0295	35.9967	105.887	1.30484	104.582	110.327	109.022
41	3.43206	327.658	-6.63437	FN	2	21.5	32.0617	32.947	95.2915	0	95.2915	99.0207	99.0207
42	3.43206	287.225	-6.04005	FN	2	21.5	28.4064	29.1907	83.8483	0	83.8483	86.854	86.854
43	3.43206	255.968	-5.44638	FN	2	21.5	25.5833	26.2897	75.011	0	75.011	77.4503	77.4503
44	3.43206	224.81	-4.85329	FN	2	21.5	22.7474	23.3755	66.1329	0	66.1329	68.0644	68.0644
45	3.43206	190.592	-4.26072	FN	2	21.5	19.5998	20.141	56.2798	0	56.2798	57.74	57.74
46	3.43206	152.917	-3.66862	FN	2	21.5	16.0996	16.5441	45.3219	0	45.3219	46.3542	46.3542
47	3.43206	123.319	-3.0769	FN	2	21.5	13.3414	13.7098	36.6879	0	36.6879	37.4051	37.4051
48	3.43206	105.768	-2.48551	FN	2	21.5	11.7143	12.0378	31.5941	0	31.5941	32.1026	32.1026
49	3.43206	71.1907	-1.89439	FN	2	21.5	8.43915	8.67216	21.3414	0	21.3414	21.6205	21.6205
50	3.43206	27.2427	-1.30456	FN	2	21.5	4.23465	4.35157	8.1792	0	8.1792	8.27564	8.27564

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.01158

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	58.4461	122.521	0	0	0
2	61.5486	120.703	1.38713	0	0
3	64.6511	118.93	-830.073	0	0
4	64.7067	118.899	-832.263	0	0
5	68.0139	117.058	-803.198	0	0
6	71.321	115.266	-752.075	0	0
7	74.6282	113.522	-674.157	0	0
8	77.9354	111.825	-572.309	0	0
9	81.2425	110.174	-460.024	0	0
10	84.5497	108.569	-352.3	0	0
11	87.8569	107.008	-259.752	0	0
12	91.164	105.492	-180.987	0	0
13	94.4712	104.019	-115.046	0	0
14	97.7784	102.588	-61.7568	0	0
15	101.086	101.2	-16.2165	0	0
16	104.393	99.8539	18.7217	0	0
17	107.7	98.5486	52.848	0	0
18	111.007	97.2838	89.18	0	0
19	114.314	96.0591	127.693	0	0
20	117.621	94.874	167.55	0	0
21	120.929	93.7281	207.14	0	0
22	124.236	92.6209	241.669	0	0
23	127.596	91.535	273.955	0	0
24	130.957	90.4883	306.061	0	0
25	134.318	89.4804	336.924	0	0
26	137.679	88.5109	366.129	0	0
27	141.04	87.5795	392.438	0	0
28	144.4	86.6858	413.688	0	0
29	147.761	85.8296	429.952	0	0
30	151.122	85.0106	440.868	0	0
31	154.483	84.2283	446.137	0	0
32	157.844	83.4827	445.974	0	0
33	161.204	82.7734	439.887	0	0
34	164.565	82.1002	428.176	0	0
35	167.926	81.4629	412.062	0	0
36	171.287	80.8613	391.656	0	0
37	174.647	80.2952	366.513	0	0
38	178.008	79.7643	336.895	0	0
39	181.369	79.2686	303.553	0	0
40	184.73	78.8078	265.463	0	0
41	188.091	78.3819	223.483	0	0
42	191.523	77.9827	179.52	0	0
43	194.955	77.6195	137.034	0	0
44	198.387	77.2923	95.6437	0	0
45	201.819	77.0009	56.0334	0	0
46	205.251	76.7452	19.4036	0	0
47	208.683	76.5251	-12.8645	0	0
48	212.115	76.3407	-41.4124	0	0
49	215.547	76.1917	-67.945	0	0
50	218.979	76.0782	-88.4847	0	0
51	222.411	76	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.02761

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	58.4461	122.521	0	0	0
2	61.5486	120.703	1.48927	0	0
3	64.6511	118.93	-815.048	0	0
4	64.7067	118.899	-817.2	0	0
5	68.0139	117.058	-787.418	0	0
6	71.321	115.266	-735.144	0	0
7	74.6282	113.522	-655.515	0	0
8	77.9354	111.825	-551.408	0	0
9	81.2425	110.174	-436.553	0	0
10	84.5497	108.569	-326.246	0	0
11	87.8569	107.008	-231.348	0	0
12	91.164	105.492	-150.455	0	0
13	94.4712	104.019	-82.6029	0	0
14	97.7784	102.588	-27.6429	0	0
15	101.086	101.2	19.4421	0	0
16	104.393	99.8539	55.6954	0	0
17	107.7	98.5486	91.1945	0	0
18	111.007	97.2838	129.071	0	0
19	114.314	96.0591	169.328	0	0
20	117.621	94.874	211.129	0	0
21	120.929	93.7281	252.829	0	0
22	124.236	92.6209	289.432	0	0
23	127.596	91.535	323.785	0	0
24	130.957	90.4883	357.997	0	0
25	134.318	89.4804	391.038	0	0
26	137.679	88.5109	422.538	0	0
27	141.04	87.5795	451.243	0	0
28	144.4	86.6858	474.842	0	0
29	147.761	85.8296	493.469	0	0
30	151.122	85.0106	506.803	0	0
31	154.483	84.2283	514.482	0	0
32	157.844	83.4827	516.733	0	0
33	161.204	82.7734	513.103	0	0
34	164.565	82.1002	503.847	0	0
35	167.926	81.4629	490.104	0	0
36	171.287	80.8613	471.979	0	0
37	174.647	80.2952	449.073	0	0
38	178.008	79.7643	421.627	0	0
39	181.369	79.2686	390.352	0	0
40	184.73	78.8078	354.281	0	0
41	188.091	78.3819	314.225	0	0
42	191.523	77.9827	272.062	0	0
43	194.955	77.6195	231.173	0	0
44	198.387	77.2923	191.222	0	0
45	201.819	77.0009	152.895	0	0
46	205.251	76.7452	117.372	0	0
47	208.683	76.5251	86.0157	0	0
48	212.115	76.3407	58.2251	0	0
49	215.547	76.1917	32.3592	0	0
50	218.979	76.0782	12.3013	0	0
51	222.411	76	0	0	0

Discharge Sections

Entity Information

◆ Group 1

Shared Entities

Type	Coordinates (x,y)
	25.4979, 130
	25.4069, 130.247
	25.2696, 130.572
	24.8858, 131.622
	22.3415, 132
	21.9413, 131.844
	21.0031, 131.671
	20.6505, 131.668
	11.208, 133.119
	10.8953, 133.16
	10.4321, 133.196
	9.55674, 133.297
	7.48177, 133.492
	5, 133.758
	3.00289, 134
	2.88071, 134
	2.17883, 134.251
	0.570212, 135
	0, 135.255
	0, 128.676
	0, 104.153
	0, 0
	224.8, 0
	224.8, 57.7088
	224.8, 70.5167
	224.8, 72.1661
	224.8, 75.8234
	223.581, 76
	222.411, 76
	219.479, 76.7847
	218.738, 76.9345
	216.277, 77.4161
	215.591, 77.5825
	214.628, 77.8032
	213.547, 78
	212.084, 78
	210.442, 78.3051
	209.372, 78.5379
	207.062, 78.9265
	202.719, 80
	199.473, 80.7341
	198.911, 80.8711
	195.904, 81.5578
	193.862, 82


External Boundary

191.908, 82.5977
189.939, 83.1606
188.515, 83.5931
187.118, 84
185.195, 84.5404
184.528, 84.7
183.138, 85.072
182.111, 85.2921
181.635, 85.4172
178.726, 86
176.285, 86.791
175.591, 86.9145
174.864, 87.1222
174.317, 87.2291
173.609, 87.3846
173.039, 87.5409
172.253, 87.7041
170.502, 88.0865
168.917, 88.4477
168.158, 88.6916
167.251, 88.9308
166.461, 89.1697
165.892, 89.3283
164.765, 89.6665
164.415, 89.7572
163.674, 90
163.24, 90.101
162.932, 90.1561
158.943, 91.0212
156.689, 91.427
154.451, 91.84
154.278, 91.8609
153.68, 92
153.347, 92.1266
153.252, 92.1431
151.339, 92.7601
150.751, 92.8561
150.234, 92.9593
149.694, 93.1157
147.828, 93.5001
147.487, 93.5953
146.577, 93.7559
146.299, 93.825
145.056, 94
144.519, 94.1311
144.361, 94.184
142.324, 94.7711
142.022, 94.8851
140.762, 95.2966
140.185, 95.5103
138.767, 95.921
138.314, 96
136.852, 96.1959
135.933, 96.3089
135.84, 96.3264
135.214, 96.395
134.349, 96.5504
133.627, 96.6665
131.722, 97.0342

130.09, 97.3844
129.754, 97.4478
128.789, 97.6835
128.641, 97.705
127.089, 98.1445
126.274, 98.3099
126.069, 98.3778
125.642, 98.4464
125.144, 98.5149
124.807, 98.6564
124.211, 98.7155
123.696, 98.981
123.332, 99.0476
122.388, 99.6466
122.193, 99.7459
121.814, 100
119.279, 100.852
118.596, 100.927
117.909, 101.019
117.391, 101.149
116.667, 101.263
116.188, 101.37
115.433, 101.49
115.216, 101.534
113.689, 101.781
113.554, 101.811
112.461, 102
110.897, 102.246
110.48, 102.336
109.262, 102.564
108.335, 102.794
106.673, 103.139
106.117, 103.272
103.829, 103.841
103.601, 103.889
103.209, 104
102.028, 104.84
100.47, 106
96.5657, 108
95.213, 108.867
93.5928, 110
93.15, 110.3
90.527, 112
87.4899, 114
84.5577, 116
83.3391, 116.852
82.3848, 117.537
81.7284, 118
77.5564, 119.411
71.9178, 119.402
68.0683, 119.455
66.2411, 120
62.5624, 120.164
58.9944, 122.546
37.5438, 121.563
27.3314, 121.095
27.3314, 128.783

Material Boundary	68.0683, 119.455 64.6757, 118.93 67.7233, 115.841 71.208, 113.755 80, 109.449 92.8411, 100.735 97.7186, 98.7641 107.398, 95.615 111.755, 93.748 115, 92.2525 123.021, 90.0475 130.646, 88.0695 145, 85.0663 164.092, 80.9917 167.166, 80.5713 182.249, 78.2852 191.586, 76.8001 197.24, 75.6378 206.161, 73.5887 207.889, 73.1315 212.079, 72.2327 224.8, 70.5167
Material Boundary	37.5438, 121.563 44.1523, 119.611 46.944, 119.264 52.9997, 119.034 58.542, 118.93 64.6757, 118.93
Material Boundary	0, 104.153 36.4954, 93.6417 51.5043, 91.2204 74.0848, 86.9542 92.8764, 82.4013 121.174, 76.5204 224.8, 57.7088

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 128.676 19.4778, 124.236 27.0465, 120.803 36.5129, 118.772 45.2417, 115.661 56.263, 111.319 61.671, 109.533 67.972, 107.227 71.857, 106.593 77.61, 105.307 89.3497, 101.92 94.4771, 100.395 105.324, 97.5145 117.898, 94.0371 127.726, 91.8408 138.896, 89.0345 151.532, 85.8012 161.644, 83.4659 171.716, 81.5747 181.177, 79.8055 193.324, 77.3042 203.884, 75.352 221.577, 72.7134 224.8, 72.1661	Assigned to: 
Distributed Load	57.0666, 122.457 37.5438, 121.563 29.1382, 121.177	Constant DistributionOrientation: Normal to boundaryMagnitude: 6 kN/m2Creates Excess Pore Pressure: No



2+970

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

2+970

Project Summary

File Name:	2+970.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.513s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Left to Right

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3





Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Materials

AC	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	23
Cohesion [kPa]	100
Friction Angle [deg]	27
Water Surface	Water Table
Hu Value	1
AC alt	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1
R	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	20
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1
FN	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	0
Friction Angle [deg]	23
Water Surface	Water Table
Hu Value	1

Probabilistic Input Data

General Settings

Sensitivity Analysis: On
Probabilistic Analysis: Off
Spatial Variability Analysis: Off

Variables

Material	Property	Distribution	Mean	Min	Max
FN	Phi	Normal	23	20	26

Global Minimums

Method: bishop simplified

	FS	1.088530
Center:		187.541, 380.497
Radius:		288.785
Left Slip Surface Endpoint:		57.809, 122.491
Right Slip Surface Endpoint:		102.470, 104.526
Resisting Moment:		301765 kN-m
Driving Moment:		277223 kN-m
Total Slice Area:		133.828 m ²
Surface Horizontal Width:		44.6603 m
Surface Average Height:		2.99658 m

Method: janbu simplified

	FS	1.087680
Center:		187.541, 380.497
Radius:		288.785
Left Slip Surface Endpoint:		57.809, 122.491
Right Slip Surface Endpoint:		102.470, 104.526
Resisting Horizontal Force:		970.795 kN
Driving Horizontal Force:		892.541 kN
Total Slice Area:		133.828 m ²
Surface Horizontal Width:		44.6603 m
Surface Average Height:		2.99658 m

Global Minimum Support Data

No Supports Present

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces: 4592

Number of Invalid Surfaces: 8

Error Codes

Error Code -112 reported for 8 surfaces

Method: janbu simplified

Number of Valid Surfaces: 4600

Number of Invalid Surfaces: 0

Error Code Descriptions

The following errors were encountered during the computation:

-112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi))/F < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.08853

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	0.902661	4.45264	-26.5943	R	0	35	2.4002	2.61269	3.73131	0	3.73131	4.93294	4.93294
2	0.902661	10.5763	-26.3942	R	0	35	5.71331	6.21911	8.88181	0	8.88181	11.7172	11.7172
3	0.902661	8.31742	-26.1944	R	0	35	4.50257	4.90118	6.99962	0	6.99962	9.21461	9.21461
4	0.902661	5.41959	-25.995	R	0	35	2.94006	3.20034	4.57055	0	4.57055	6.00419	6.00419
5	0.902661	2.45162	-25.7959	R	0	35	1.33277	1.45076	2.0719	0	2.0719	2.71607	2.71607
6	0.902661	2.15301	-25.5972	R	0	35	1.17289	1.27673	1.82336	0	1.82336	2.38524	2.38524
7	0.902661	8.84206	-25.3988	R	0	35	4.82698	5.25431	7.50393	0	7.50393	9.79583	9.79583
8	0.902661	15.8199	-25.2007	R	0	35	8.65428	9.42044	13.4537	0	13.4537	17.5262	17.5262
9	0.891405	22.2799	-25.0041	FN	0	23	8.24685	8.97694	21.1484	0	21.1484	24.9947	24.9947
10	0.891405	27.875	-24.8092	FN	0	23	10.3319	11.2466	26.4955	0	26.4955	31.2715	31.2715
11	0.891405	30.4661	-24.6145	FN	0	23	11.3077	12.3088	28.9977	0	28.9977	34.1782	34.1782
12	0.891405	33.54	-24.4201	FN	0	23	12.4655	13.5691	31.9669	0	31.9669	37.6267	37.6267
13	0.891405	39.9489	-24.226	FN	0	23	14.8676	16.1838	38.1266	0	38.1266	44.8165	44.8165
14	0.891405	46.6753	-24.0322	FN	0	23	17.3944	18.9343	44.6064	0	44.6064	52.3626	52.3626
15	0.891405	53.339	-23.8387	FN	0	23	19.9044	21.6665	51.0431	0	51.0431	59.8381	59.8381
16	0.891405	59.9491	-23.6455	FN	0	23	22.401	24.3842	57.4456	0	57.4456	67.2535	67.2535
17	0.891405	66.6626	-23.4526	FN	0	23	24.943	27.1512	63.9642	0	63.9642	74.7852	74.7852
18	0.891405	73.3767	-23.2599	FN	0	23	27.4918	29.9256	70.5003	0	70.5003	82.3174	82.3174
19	0.891405	80.0291	-23.0676	FN	0	23	30.024	32.682	76.994	0	76.994	89.7803	89.7803
20	0.891405	86.6202	-22.8755	FN	0	23	32.5398	35.4205	83.4455	0	83.4455	97.1744	97.1744
21	0.891405	93.15	-22.6837	FN	0	23	35.039	38.141	89.8544	0	89.8544	104.5	104.5
22	0.891405	99.619	-22.4921	FN	0	23	37.5216	40.8434	96.2211	0	96.2211	111.757	111.757
23	0.891405	103.661	-22.3008	FN	0	23	39.0953	42.5564	100.257	0	100.257	116.291	116.291
24	0.891405	104.754	-22.1098	FN	0	23	39.5592	43.0614	101.446	0	101.446	117.517	117.517
25	0.891405	105.78	-21.919	FN	0	23	39.9987	43.5398	102.573	0	102.573	118.668	118.668
26	0.891405	106.745	-21.7285	FN	0	23	40.4164	43.9945	103.645	0	103.645	119.752	119.752
27	0.891405	107.447	-21.5383	FN	0	23	40.7349	44.3412	104.462	0	104.462	120.539	120.539
28	0.891405	104.102	-21.3483	FN	0	23	39.5178	43.0163	101.34	0	101.34	116.786	116.786
29	0.891405	99.0632	-21.1585	FN	0	23	37.6537	40.9872	96.5599	0	96.5599	111.133	111.133
30	0.891405	94.1529	-20.969	FN	0	23	35.8335	39.0058	91.8919	0	91.8919	105.625	105.625
31	0.891405	89.382	-20.7797	FN	0	23	34.0614	37.0769	87.3478	0	87.3478	100.273	100.273
32	0.891405	84.6635	-20.5906	FN	0	23	32.3047	35.1646	82.8427	0	82.8427	94.9792	94.9792
33	0.891405	79.8867	-20.4018	FN	0	23	30.521	33.223	78.2685	0	78.2685	89.6203	89.6203
34	0.891405	75.1701	-20.2133	FN	0	23	28.7557	31.3014	73.7415	0	73.7415	84.329	84.329
35	0.891405	70.6358	-20.0249	FN	0	23	27.0555	29.4507	69.3815	0	69.3815	79.2422	79.2422
36	0.891405	66.0507	-19.8368	FN	0	23	25.3314	27.574	64.9603	0	64.9603	74.0985	74.0985
37	0.891405	61.4209	-19.6489	FN	0	23	23.5857	25.6737	60.4834	0	60.4834	68.9045	68.9045
38	0.891405	56.8527	-19.4612	FN	0	23	21.859	23.7942	56.0557	0	56.0557	63.7797	63.7797
39	0.891405	52.2566	-19.2737	FN	0	23	20.1172	21.8982	51.589	0	51.589	58.6236	58.6236
40	0.891405	47.5568	-19.0865	FN	0	23	18.3311	19.9539	47.0083	0	47.0083	53.3511	53.3511
41	0.891405	42.3072	-18.8994	FN	0	23	16.3281	17.7736	41.8719	0	41.8719	47.4621	47.4621
42	0.891405	36.7613	-18.7126	FN	0	23	14.2054	15.463	36.4286	0	36.4286	41.2403	41.2403
43	0.891405	31.715	-18.526	FN	0	23	12.2708	13.3571	31.4673	0	31.4673	35.5792	35.5792
44	0.891405	27.3316	-18.3396	FN	0	23	10.5879	11.5253	27.152	0	27.152	30.6617	30.6617
45	0.891405	24.3605	-18.1533	FN	0	23	9.44871	10.2852	24.2305	0	24.2305	27.3286	27.3286
46	0.891405	21.4753	-17.9673	FN	0	23	8.34004	9.07838	21.3874	0	21.3874	24.0919	24.0919
47	0.891405	18.5346	-17.7815	FN	0	23	7.20693	7.84496	18.4816	0	18.4816	20.7929	20.7929
48	0.891405	15.4318	-17.5959	FN	0	23	6.00785	6.53973	15.4067	0	15.4067	17.312	17.312
49	0.891405	9.8132	-17.4104	FN	0	23	3.82518	4.16382	9.80934	0	9.80934	11.0088	11.0088
50	0.891405	3.17399	-17.2252	FN	0	23	1.23874	1.34841	3.17666	0	3.17666	3.56071	3.56071

Global Minimum Query (janbu simplified) - Safety Factor: 1.08768

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	0.902661	4.45264	-26.5943	R	0	35	2.40154	2.61211	3.73049	0	3.73049	4.93279	4.93279
2	0.902661	10.5763	-26.3942	R	0	35	5.71653	6.21775	8.87987	0	8.87987	11.7169	11.7169
3	0.902661	8.31742	-26.1944	R	0	35	4.50511	4.90012	6.99809	0	6.99809	9.21433	9.21433
4	0.902661	5.41959	-25.995	R	0	35	2.94171	3.19964	4.56956	0	4.56956	6.00401	6.00401
5	0.902661	2.45162	-25.7959	R	0	35	1.33353	1.45045	2.07146	0	2.07146	2.716	2.716
6	0.902661	2.15301	-25.5972	R	0	35	1.17356	1.27646	1.82297	0	1.82297	2.38517	2.38517
7	0.902661	8.84206	-25.3988	R	0	35	4.82973	5.2532	7.50235	0	7.50235	9.79555	9.79555
8	0.902661	15.8199	-25.2007	R	0	35	8.65921	9.41845	13.4509	0	13.4509	17.5258	17.5258
9	0.891405	22.2799	-25.0041	FN	0	23	8.25214	8.97569	21.1454	0	21.1454	24.9942	24.9942
10	0.891405	27.875	-24.8092	FN	0	23	10.3386	11.2451	26.4918	0	26.4918	31.2709	31.2709
11	0.891405	30.4661	-24.6145	FN	0	23	11.315	12.3071	28.9937	0	28.9937	34.1776	34.1776
12	0.891405	33.54	-24.4201	FN	0	23	12.4736	13.5673	31.9625	0	31.9625	37.626	37.626
13	0.891405	39.9489	-24.226	FN	0	23	14.8772	16.1816	38.1215	0	38.1215	44.8157	44.8157
14	0.891405	46.6753	-24.0322	FN	0	23	17.4056	18.9317	44.6003	0	44.6003	52.3615	52.3615
15	0.891405	53.339	-23.8387	FN	0	23	19.9173	21.6637	51.0364	0	51.0364	59.837	59.837
16	0.891405	59.9491	-23.6455	FN	0	23	22.4156	24.381	57.4381	0	57.4381	67.2524	67.2524
17	0.891405	66.6626	-23.4526	FN	0	23	24.9592	27.1476	63.9558	0	63.9558	74.7838	74.7838
18	0.891405	73.3767	-23.2599	FN	0	23	27.5097	29.9217	70.4911	0	70.4911	82.3159	82.3159
19	0.891405	80.0291	-23.0676	FN	0	23	30.0436	32.6778	76.9841	0	76.9841	89.7787	89.7787
20	0.891405	86.6202	-22.8755	FN	0	23	32.561	35.416	83.4348	0	83.4348	97.1727	97.1727
21	0.891405	93.15	-22.6837	FN	0	23	35.0619	38.1361	89.843	0	89.843	104.498	104.498
22	0.891405	99.619	-22.4921	FN	0	23	37.5462	40.8383	96.209	0	96.209	111.755	111.755
23	0.891405	103.661	-22.3008	FN	0	23	39.121	42.5511	100.244	0	100.244	116.289	116.289
24	0.891405	104.754	-22.1098	FN	0	23	39.5852	43.056	101.434	0	101.434	117.515	117.515
25	0.891405	105.78	-21.919	FN	0	23	40.0251	43.5345	102.561	0	102.561	118.666	118.666
26	0.891405	106.745	-21.7285	FN	0	23	40.4431	43.9892	103.632	0	103.632	119.75	119.75
27	0.891405	107.447	-21.5383	FN	0	23	40.7619	44.3359	104.449	0	104.449	120.537	120.537
28	0.891405	104.102	-21.3483	FN	0	23	39.5439	43.0111	101.328	0	101.328	116.784	116.784
29	0.891405	99.0632	-21.1585	FN	0	23	37.6787	40.9824	96.5484	0	96.5484	111.132	111.132
30	0.891405	94.1529	-20.969	FN	0	23	35.8572	39.0012	91.8811	0	91.8811	105.623	105.623
31	0.891405	89.382	-20.7797	FN	0	23	34.0841	37.0726	87.3375	0	87.3375	100.271	100.271
32	0.891405	84.6635	-20.5906	FN	0	23	32.3262	35.1606	82.8331	0	82.8331	94.9777	94.9777
33	0.891405	79.8867	-20.4018	FN	0	23	30.5413	33.2192	78.2596	0	78.2596	89.6189	89.6189
34	0.891405	75.1701	-20.2133	FN	0	23	28.7748	31.2978	73.7332	0	73.7332	84.3278	84.3278
35	0.891405	70.6358	-20.0249	FN	0	23	27.0736	29.4474	69.3737	0	69.3737	79.241	79.241
36	0.891405	66.0507	-19.8368	FN	0	23	25.3484	27.5709	64.953	0	64.953	74.0974	74.0974
37	0.891405	61.4209	-19.6489	FN	0	23	23.6014	25.6708	60.4767	0	60.4767	68.9035	68.9035
38	0.891405	56.8527	-19.4612	FN	0	23	21.8737	23.7916	56.0495	0	56.0495	63.7788	63.7788
39	0.891405	52.2566	-19.2737	FN	0	23	20.1308	21.8959	51.5834	0	51.5834	58.6228	58.6228
40	0.891405	47.5568	-19.0865	FN	0	23	18.3434	19.9517	47.0033	0	47.0033	53.3504	53.3504
41	0.891405	42.3072	-18.8994	FN	0	23	16.3391	17.7717	41.8674	0	41.8674	47.4614	47.4614
42	0.891405	36.7613	-18.7126	FN	0	23	14.215	15.4614	36.4247	0	36.4247	41.2397	41.2397
43	0.891405	31.715	-18.526	FN	0	23	12.2791	13.3557	31.464	0	31.464	35.5787	35.5787
44	0.891405	27.3316	-18.3396	FN	0	23	10.5951	11.5241	27.1492	0	27.1492	30.6613	30.6613
45	0.891405	24.3605	-18.1533	FN	0	23	9.45517	10.2842	24.2281	0	24.2281	27.3283	27.3283
46	0.891405	21.4753	-17.9673	FN	0	23	8.34571	9.07746	21.3851	0	21.3851	24.0915	24.0915
47	0.891405	18.5346	-17.7815	FN	0	23	7.21184	7.84417	18.4797	0	18.4797	20.7926	20.7926
48	0.891405	15.4318	-17.5959	FN	0	23	6.01195	6.53908	15.4051	0	15.4051	17.3117	17.3117
49	0.891405	9.8132	-17.4104	FN	0	23	3.82779	4.16341	9.80838	0	9.80838	11.0087	11.0087
50	0.891405	3.17399	-17.2252	FN	0	23	1.23959	1.34828	3.17635	0	3.17635	3.56066	3.56066

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.08853

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	57.8094	122.491	0	0	0
2	58.7121	122.04	-0.480095	0	0
3	59.6148	121.592	-1.65784	0	0
4	60.5174	121.148	-2.61342	0	0
5	61.4201	120.707	-3.25518	0	0
6	62.3228	120.271	-3.55414	0	0
7	63.2254	119.839	-3.82426	0	0
8	64.1281	119.41	-4.96472	0	0
9	65.0307	118.985	-7.06082	0	0
10	65.9221	118.57	-5.61881	0	0
11	66.8135	118.157	-3.90992	0	0
12	67.705	117.749	-2.14608	0	0
13	68.5964	117.344	-0.31841	0	0
14	69.4878	116.943	1.72279	0	0
15	70.3792	116.546	3.94942	0	0
16	71.2706	116.152	6.31343	0	0
17	72.162	115.762	8.76787	0	0
18	73.0534	115.375	11.2724	0	0
19	73.9448	114.992	13.7821	0	0
20	74.8362	114.612	16.2504	0	0
21	75.7276	114.236	18.6313	0	0
22	76.619	113.863	20.8796	0	0
23	77.5104	113.494	22.9509	0	0
24	78.4018	113.129	24.7599	0	0
25	79.2932	112.767	26.2388	0	0
26	80.1846	112.408	27.3798	0	0
27	81.076	112.053	28.1763	0	0
28	81.9674	111.701	28.6213	0	0
29	82.8588	111.352	28.7071	0	0
30	83.7502	111.007	28.4607	0	0
31	84.6416	110.666	27.9151	0	0
32	85.533	110.328	27.1018	0	0
33	86.4244	109.993	26.0521	0	0
34	87.3159	109.661	24.7983	0	0
35	88.2073	109.333	23.371	0	0
36	89.0987	109.008	21.7976	0	0
37	89.9901	108.686	20.1092	0	0
38	90.8815	108.368	18.3377	0	0
39	91.7729	108.053	16.5115	0	0
40	92.6643	107.741	14.6617	0	0
41	93.5557	107.433	12.8227	0	0
42	94.4471	107.128	11.0483	0	0
43	95.3385	106.826	9.38646	0	0
44	96.2299	106.527	7.8492	0	0
45	97.1213	106.232	6.43525	0	0
46	98.0127	105.939	5.0956	0	0
47	98.9041	105.65	3.84467	0	0
48	99.7955	105.364	2.70471	0	0
49	100.687	105.082	1.70539	0	0
50	101.578	104.802	1.03801	0	0
51	102.47	104.526	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.08768

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	57.8094	122.491	0	0	0
2	58.7121	122.04	-0.481949	0	0
3	59.6148	121.592	-1.66411	0	0
4	60.5174	121.148	-2.62315	0	0
5	61.4201	120.707	-3.26718	0	0
6	62.3228	120.271	-3.56715	0	0
7	63.2254	119.839	-3.83817	0	0
8	64.1281	119.41	-4.98234	0	0
9	65.0307	118.985	-7.08506	0	0
10	65.9221	118.57	-5.64991	0	0
11	66.8135	118.157	-3.94959	0	0
12	67.705	117.749	-2.1951	0	0
13	68.5964	117.344	-0.377735	0	0
14	69.4878	116.943	1.6512	0	0
15	70.3792	116.546	3.86351	0	0
16	71.2706	116.152	6.21115	0	0
17	72.162	115.762	8.6472	0	0
18	73.0534	115.375	11.1313	0	0
19	73.9448	114.992	13.6185	0	0
20	74.8362	114.612	16.0622	0	0
21	75.7276	114.236	18.4166	0	0
22	76.619	113.863	20.6364	0	0
23	77.5104	113.494	22.6771	0	0
24	78.4018	113.129	24.4544	0	0
25	79.2932	112.767	25.9012	0	0
26	80.1846	112.408	27.0098	0	0
27	81.076	112.053	27.7737	0	0
28	81.9674	111.701	28.1857	0	0
29	82.8588	111.352	28.2397	0	0
30	83.7502	111.007	27.9629	0	0
31	84.6416	110.666	27.3885	0	0
32	85.533	110.328	26.5478	0	0
33	86.4244	109.993	25.4722	0	0
34	87.3159	109.661	24.1939	0	0
35	88.2073	109.333	22.7436	0	0
36	89.0987	109.008	21.1485	0	0
37	89.9901	108.686	19.4399	0	0
38	90.8815	108.368	17.6495	0	0
39	91.7729	108.053	15.8059	0	0
40	92.6643	107.741	13.9401	0	0
41	93.5557	107.433	12.0865	0	0
42	94.4471	107.128	10.2992	0	0
43	95.3385	106.826	8.62602	0	0
44	96.2299	106.527	7.07902	0	0
45	97.1213	106.232	5.65668	0	0
46	98.0127	105.939	4.30955	0	0
47	98.9041	105.65	3.05203	0	0
48	99.7955	105.364	1.90636	0	0
49	100.687	105.082	0.902299	0	0
50	101.578	104.802	0.231901	0	0
51	102.47	104.526	0	0	0

Discharge Sections

Entity Information

◆ Group 1

Shared Entities

Type	Coordinates (x,y)
	25.4979, 130
	25.4069, 130.247
	25.2696, 130.572
	24.8858, 131.622
	22.3415, 132
	21.9413, 131.844
	21.0031, 131.671
	20.6505, 131.668
	11.208, 133.119
	10.8953, 133.16
	10.4321, 133.196
	9.55674, 133.297
	7.48177, 133.492
	5, 133.758
	3.00289, 134
	2.88071, 134
	2.17883, 134.251
	0.570212, 135
	0, 135.255
	0, 128.676
	0, 104.153
	0, 0
	224.8, 0
	224.8, 57.7088
	224.8, 70.5167
	224.8, 72.1661
	224.8, 75.8234
	223.581, 76
	222.411, 76
	219.479, 76.7847
	218.738, 76.9345
	216.277, 77.4161
	215.591, 77.5825
	214.628, 77.8032
	213.547, 78
	212.084, 78
	210.442, 78.3051
	209.372, 78.5379
	207.062, 78.9265
	202.719, 80
	199.473, 80.7341
	198.911, 80.8711
	195.904, 81.5578
	193.862, 82





External Boundary

191.908, 82.5977
189.939, 83.1606
188.515, 83.5931
187.118, 84
185.195, 84.5404
184.528, 84.7
183.138, 85.072
182.111, 85.2921
181.635, 85.4172
178.726, 86
176.285, 86.791
175.591, 86.9145
174.864, 87.1222
174.317, 87.2291
173.609, 87.3846
173.039, 87.5409
172.253, 87.7041
170.502, 88.0865
168.917, 88.4477
168.158, 88.6916
167.251, 88.9308
166.461, 89.1697
165.892, 89.3283
164.765, 89.6665
164.415, 89.7572
163.674, 90
163.24, 90.101
162.932, 90.1561
158.943, 91.0212
156.689, 91.427
154.451, 91.84
154.278, 91.8609
153.68, 92
153.347, 92.1266
153.252, 92.1431
151.339, 92.7601
150.751, 92.8561
150.234, 92.9593
149.694, 93.1157
147.828, 93.5001
147.487, 93.5953
146.577, 93.7559
146.299, 93.825
145.056, 94
144.519, 94.1311
144.361, 94.184
142.324, 94.7711
142.022, 94.8851
140.762, 95.2966
140.185, 95.5103
138.767, 95.921
138.314, 96
136.852, 96.1959
135.933, 96.3089
135.84, 96.3264
135.214, 96.395
134.349, 96.5504
133.627, 96.6665
131.722, 97.0342

130.09, 97.3844
129.754, 97.4478
128.789, 97.6835
128.641, 97.705
127.089, 98.1445
126.274, 98.3099
126.069, 98.3778
125.642, 98.4464
125.144, 98.5149
124.807, 98.6564
124.211, 98.7155
123.696, 98.981
123.332, 99.0476
122.388, 99.6466
122.193, 99.7459
121.814, 100
119.279, 100.852
118.596, 100.927
117.909, 101.019
117.391, 101.149
116.667, 101.263
116.188, 101.37
115.433, 101.49
115.216, 101.534
113.689, 101.781
113.554, 101.811
112.461, 102
110.897, 102.246
110.48, 102.336
109.262, 102.564
108.335, 102.794
106.673, 103.139
106.117, 103.272
103.829, 103.841
103.601, 103.889
103.209, 104
102.028, 104.84
100.47, 106
96.5657, 108
95.213, 108.867
93.5928, 110
93.15, 110.3
90.527, 112
87.4899, 114
84.5577, 116
83.3391, 116.852
82.3848, 117.537
81.7284, 118
77.5564, 119.411
71.9178, 119.402
68.0683, 119.455
66.2411, 120
62.5624, 120.164
58.9944, 122.546
37.5438, 121.563
27.3314, 121.095
27.3314, 128.783

Material Boundary	68.0683, 119.455 64.6757, 118.93 67.7233, 115.841 70, 113.714 80, 109.449 92.8411, 100.735 97.7186, 98.7641 107.481, 94.5594 110.354, 93.7591 115, 92.2525 123.021, 90.0475 130.646, 88.0695 145, 85.0663 164.092, 80.9917 167.166, 80.5713 182.249, 78.2852 191.586, 76.8001 197.24, 75.6378 206.161, 73.5887 207.889, 73.1315 212.079, 72.2327 224.8, 70.5167
Material Boundary	37.5438, 121.563 44.1523, 119.611 46.944, 119.264 52.9997, 119.034 58.542, 118.93 64.6757, 118.93
Material Boundary	0, 104.153 36.4954, 93.6417 51.5043, 91.2204 74.0848, 86.9542 92.8764, 82.4013 121.174, 76.5204 224.8, 57.7088

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 128.676	Assigned to:
	19.4778, 124.236	 AC
	27.0465, 120.803	 AC alt
	36.5129, 118.772	 R
	45.2417, 115.661	 FN
	55.5941, 112.413	
	61.5151, 110.339	
	67.9854, 108.265	
	71.3427, 107.227	
	76.9584, 105.824	
	89.3497, 101.92	
	94.4771, 100.395	
	105.324, 97.5145	
	117.898, 94.0371	
	127.726, 91.8408	
	138.896, 89.0345	
	151.532, 85.8012	
	161.644, 83.4659	
	171.716, 81.5747	
	181.177, 79.8055	
193.324, 77.3042		
203.884, 75.352		
221.577, 72.7134		
224.8, 72.1661		



3+080 -sima

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

3+080 -sisma

Project Summary

File Name:	3+080 -sisma.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.357s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Left to Right

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	M1+R2 fronti scavo sisma	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1	
Variable Actions: Favourable	1	
Effective cohesion	1	
Coefficient of shearing resistance	1	
Undrained strength	1	
Weight density	1	
Shear strength (other models)	1	
Earth resistance	1.2	
Tensile and plate strength	1	
Shear strength	1	
Compressive strength	1	
Bond strength	1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.091
Seismic Load Coefficient (Vertical):	0.045





Loading

1 Distributed Load present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	6
Orientation:	Normal to boundary
Load Action:	Live

Materials


AC	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	23
Cohesion [kPa]	100
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1
AC alt	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1
R	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	20
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1
FN	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	0
Friction Angle [deg]	21
Water Surface	Water Table
Hu Value	1

Support




pali

Color	
Type	Pile/Micro Pile
Force Application	Passive (Method B)
Force Orientation	Parallel to surface
Out-Of-Plane Spacing	0.6 m
Failure Mode	Shear
Pile Shear Strength	260 kN

Ancoraggio

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	1.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	50 kN/m
Material Dependent	Yes

Bond Strength Dependency

	Material	Bond Strength [kN/m]
	AC alt	79
	R	27
	FN	16

Global Minimums

Method: bishop simplified

	FS	1.089590
Center:		272.462, 512.932
Radius:		448.253
Left Slip Surface Endpoint:		104.618, 97.289
Right Slip Surface Endpoint:		218.794, 67.904
Resisting Moment:		1.90917e+06 kN-m
Driving Moment:		1.75219e+06 kN-m
Passive Support Moment:		328315 kN-m
Maximum Single Support Force:		666.667 kN
Total Support Force:		1100 kN
Total Slice Area:		544.41 m ²
Surface Horizontal Width:		114.176 m
Surface Average Height:		4.76815 m

Method: janbu simplified

	FS	1.102260
Center:		272.462, 512.932
Radius:		448.253
Left Slip Surface Endpoint:		104.618, 97.289
Right Slip Surface Endpoint:		218.794, 67.904
Resisting Horizontal Force:		4281.51 kN
Driving Horizontal Force:		3884.29 kN
Passive Horizontal Support Force:		885.811 kN
Maximum Single Support Force:		666.667 kN
Total Support Force:		1100 kN
Total Slice Area:		544.41 m ²
Surface Horizontal Width:		114.176 m
Surface Average Height:		4.76815 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	25	6.86175	18.1383	6.86175	18.1383	666.667
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	18	6.43791	11.5621	6.43791	11.5621	433.333

Method: janbu simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	25	6.86175	18.1383	6.86175	18.1383	666.667
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	18	6.43791	11.5621	6.43791	11.5621	433.333

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	8781
Number of Invalid Surfaces:	33

Error Codes

Error Code -112 reported for 33 surfaces

Method: janbu simplified

Number of Valid Surfaces:	8814
Number of Invalid Surfaces:	0

Error Code Descriptions

The following errors were encountered during the computation:

-112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi)/F) < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.08959

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	2.07752	18.0004	-21.8466	R	0	35	6.40457	6.97835	11.9593	0	11.9593	14.527	14.527
2	2.07752	53.9689	-21.5608	R	0	35	14.1435	15.4106	26.4104	0	26.4104	31.999	31.999
3	2.29211	109.879	-21.2609	FN	0	21	14.4755	15.7724	49.3063	0	49.3063	54.9386	54.9386
4	2.29211	156.801	-20.9468	FN	0	21	20.0352	21.8301	68.2433	0	68.2433	75.9127	75.9127
5	2.29211	197.528	-20.6334	FN	0	21	24.8846	27.114	84.7614	0	84.7614	94.1315	94.1315
6	2.29211	238.523	-20.3207	FN	0	21	29.7844	32.4528	101.451	0	101.451	112.481	112.481
7	2.29211	278.726	-20.0086	FN	0	21	34.609	37.7096	117.884	0	117.884	130.487	130.487
8	2.29211	317.548	-19.6971	FN	0	21	39.2877	42.8075	133.821	0	133.821	147.886	147.886
9	2.29211	355.725	-19.3862	FN	0	21	43.4982	47.3952	148.163	0	148.163	163.469	163.469
10	2.29211	391.655	-19.0759	FN	0	21	46.7069	50.8914	159.092	0	159.092	175.244	175.244
11	2.29211	380.609	-18.7662	FN	0	21	45.4762	49.5504	154.9	0	154.9	170.351	170.351
12	2.29211	348.12	-18.4571	FN	0	21	91.2529	99.4283	310.824	0	310.824	341.28	341.28
13	2.29211	315.049	-18.1485	FN	0	21	37.7859	41.1711	128.705	0	128.705	141.091	141.091
14	2.29211	300.415	-17.8404	FN	0	21	22.0259	23.9992	75.0244	0	75.0244	82.1133	82.1133
15	2.29211	307.27	-17.5329	FN	0	21	36.992	40.3061	126.001	0	126.001	137.688	137.688
16	2.29211	273.023	-17.2259	FN	0	21	32.9307	35.881	112.168	0	112.168	122.378	122.378
17	2.29211	239.143	-16.9194	FN	0	21	28.8982	31.4872	98.4322	0	98.4322	107.223	107.223
18	2.29211	237.148	-16.6134	FN	0	21	28.7106	31.2828	97.7934	0	97.7934	106.36	106.36
19	2.29211	240.215	-16.3079	FN	0	21	29.1359	31.7462	99.2419	0	99.2419	107.766	107.766
20	2.29211	244.688	-16.0029	FN	0	21	29.7336	32.3974	101.278	0	101.278	109.805	109.805
21	2.29211	249.02	-15.6984	FN	0	21	30.3159	33.0319	103.261	0	103.261	111.782	111.782
22	2.29211	253.959	-15.3942	FN	0	21	30.9741	33.7491	105.504	0	105.504	114.032	114.032
23	2.29211	259.122	-15.0906	FN	0	21	31.662	34.4986	107.846	0	107.846	116.384	116.384
24	2.29211	262.969	-14.7874	FN	0	21	32.191	35.075	109.648	0	109.648	118.146	118.146
25	2.29211	265.893	-14.4846	FN	0	21	32.6086	35.53	111.07	0	111.07	119.494	119.494
26	2.29211	268.543	-14.1822	FN	0	21	32.9936	35.9495	112.382	0	112.382	120.72	120.72
27	2.29211	270.7	-13.8802	FN	0	21	33.3193	36.3044	113.491	0	113.491	121.725	121.725
28	2.29211	269.043	-13.5786	FN	0	21	33.1755	36.1477	113.002	0	113.002	121.015	121.015
29	2.29211	266.273	-13.2774	FN	0	21	32.8936	35.8405	112.041	0	112.041	119.803	119.803
30	2.29211	262.796	-12.9765	FN	0	21	32.5228	35.4365	110.778	0	110.778	118.273	118.273
31	2.29211	257.849	-12.676	FN	0	21	31.9684	34.8324	108.89	0	108.89	116.08	116.08
32	2.29211	252.034	-12.3759	FN	0	21	31.3038	34.1083	106.626	0	106.626	113.495	113.495
33	2.29211	245.233	-12.0761	FN	0	21	30.5139	33.2476	103.936	0	103.936	110.464	110.464
34	2.29211	236.853	-11.7767	FN	0	21	29.5243	32.1694	100.565	0	100.565	106.72	106.72
35	2.29211	228.534	-11.4776	FN	0	21	28.5384	31.0952	97.2072	0	97.2072	103.002	103.002
36	2.29211	220.542	-11.1788	FN	0	21	27.5899	30.0617	93.9759	0	93.9759	99.4283	99.4283
37	2.29211	216.118	-10.8803	FN	0	21	27.0849	29.5114	92.2557	0	92.2557	97.4618	97.4618
38	2.29211	212.32	-10.5821	FN	0	21	26.6564	29.0446	90.7964	0	90.7964	95.7764	95.7764
39	2.29211	206.95	-10.2842	FN	0	21	26.0287	28.3606	88.6585	0	88.6585	93.3813	93.3813
40	2.29211	193.895	-9.98657	FN	0	21	24.4303	26.619	83.2136	0	83.2136	87.5154	87.5154
41	2.29211	172.292	-9.68922	FN	0	21	21.7471	23.6954	74.0741	0	74.0741	77.7872	77.7872
42	2.29211	150.552	-9.39213	FN	0	21	19.037	20.7425	64.8431	0	64.8431	67.992	67.992
43	2.29211	99.009	-9.0953	FN	0	21	12.5417	13.6653	42.7193	0	42.7193	44.7271	44.7271
44	2.29211	79.7379	-8.79871	FN	0	21	10.1186	11.0251	34.4657	0	34.4657	36.0319	36.0319
45	2.29211	71.8605	-8.50236	FN	0	21	9.13517	9.95359	31.116	0	31.116	32.4816	32.4816
46	2.29211	63.4413	-8.20624	FN	0	21	8.07923	8.80305	27.5193	0	27.5193	28.6844	28.6844
47	2.29211	54.731	-7.91034	FN	0	21	6.98236	7.60791	23.7832	0	23.7832	24.7533	24.7533
48	2.29211	42.1205	-7.61465	FN	0	21	5.38311	5.86538	18.3358	0	18.3358	19.0555	19.0555
49	2.29211	24.5938	-7.31916	FN	0	21	3.14873	3.43083	10.7251	0	10.7251	11.1296	11.1296
50	2.29211	7.84436	-7.02387	FN	0	21	1.00609	1.09623	3.42692	0	3.42692	3.55088	3.55088

Global Minimum Query (janbu simplified) - Safety Factor: 1.10226

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	2.07752	18.0004	-21.8466	R	0	35	6.35115	7.00062	11.9975	0	11.9975	14.5438	14.5438
2	2.07752	53.9689	-21.5608	R	0	35	14.025	15.4592	26.4937	0	26.4937	32.0355	32.0355
3	2.29211	109.879	-21.2609	FN	0	21	14.336	15.802	49.3985	0	49.3985	54.9766	54.9766
4	2.29211	156.801	-20.9468	FN	0	21	19.8415	21.8705	68.3696	0	68.3696	75.9649	75.9649
5	2.29211	197.528	-20.6334	FN	0	21	24.6435	27.1635	84.9157	0	84.9157	94.195	94.195
6	2.29211	238.523	-20.3207	FN	0	21	29.4949	32.511	101.633	0	101.633	112.555	112.555
7	2.29211	278.726	-20.0086	FN	0	21	34.2717	37.7763	118.093	0	118.093	130.572	130.572
8	2.29211	317.548	-19.6971	FN	0	21	38.9038	42.8821	134.054	0	134.054	147.981	147.981
9	2.29211	355.725	-19.3862	FN	0	21	43.0721	47.4766	148.417	0	148.417	163.573	163.573
10	2.29211	391.655	-19.0759	FN	0	21	46.2481	50.9774	159.361	0	159.361	175.354	175.354
11	2.29211	380.609	-18.7662	FN	0	21	45.0282	49.6328	155.158	0	155.158	170.457	170.457
12	2.29211	348.12	-18.4571	FN	0	21	89.592	98.7537	308.715	0	308.715	338.617	338.617
13	2.29211	315.049	-18.1485	FN	0	21	37.4118	41.2375	128.913	0	128.913	141.176	141.176
14	2.29211	300.415	-17.8404	FN	0	21	22.0229	24.275	75.8861	0	75.8861	82.9741	82.9741
15	2.29211	307.27	-17.5329	FN	0	21	36.6238	40.3689	126.198	0	126.198	137.768	137.768
16	2.29211	273.023	-17.2259	FN	0	21	32.6021	35.936	112.34	0	112.34	122.448	122.448
17	2.29211	239.143	-16.9194	FN	0	21	28.609	31.5346	98.5808	0	98.5808	107.283	107.283
18	2.29211	237.148	-16.6134	FN	0	21	28.4226	31.3291	97.9381	0	97.9381	106.418	106.418
19	2.29211	240.215	-16.3079	FN	0	21	28.8429	31.7924	99.3864	0	99.3864	107.825	107.825
20	2.29211	244.688	-16.0029	FN	0	21	29.4338	32.4437	101.422	0	101.422	109.864	109.864
21	2.29211	249.02	-15.6984	FN	0	21	30.0094	33.0782	103.406	0	103.406	111.84	111.84
22	2.29211	253.959	-15.3942	FN	0	21	30.6603	33.7956	105.649	0	105.649	114.091	114.091
23	2.29211	259.122	-15.0906	FN	0	21	31.3402	34.5451	107.992	0	107.992	116.443	116.443
24	2.29211	262.969	-14.7874	FN	0	21	31.8631	35.1214	109.793	0	109.793	118.204	118.204
25	2.29211	265.893	-14.4846	FN	0	21	32.2756	35.5761	111.215	0	111.215	119.553	119.553
26	2.29211	268.543	-14.1822	FN	0	21	32.6558	35.9952	112.525	0	112.525	120.778	120.778
27	2.29211	270.7	-13.8802	FN	0	21	32.9773	36.3496	113.633	0	113.633	121.782	121.782
28	2.29211	269.043	-13.5786	FN	0	21	32.8342	36.1918	113.139	0	113.139	121.07	121.07
29	2.29211	266.273	-13.2774	FN	0	21	32.5543	35.8833	112.175	0	112.175	119.857	119.857
30	2.29211	262.796	-12.9765	FN	0	21	32.1865	35.4779	110.908	0	110.908	118.325	118.325
31	2.29211	257.849	-12.676	FN	0	21	31.637	34.8722	109.014	0	109.014	116.13	116.13
32	2.29211	252.034	-12.3759	FN	0	21	30.9784	34.1463	106.745	0	106.745	113.542	113.542
33	2.29211	245.233	-12.0761	FN	0	21	30.1961	33.2839	104.049	0	104.049	110.509	110.509
34	2.29211	236.853	-11.7767	FN	0	21	29.216	32.2036	100.672	0	100.672	106.763	106.763
35	2.29211	228.534	-11.4776	FN	0	21	28.2397	31.1275	97.3081	0	97.3081	103.042	103.042
36	2.29211	220.542	-11.1788	FN	0	21	27.3004	30.0921	94.0709	0	94.0709	99.4661	99.4661
37	2.29211	216.118	-10.8803	FN	0	21	26.7999	29.5405	92.3465	0	92.3465	97.4978	97.4978
38	2.29211	212.32	-10.5821	FN	0	21	26.3754	29.0725	90.8839	0	90.8839	95.8114	95.8114
39	2.29211	206.95	-10.2842	FN	0	21	25.7535	28.3871	88.7413	0	88.7413	93.4142	93.4142
40	2.29211	193.895	-9.98657	FN	0	21	24.1714	26.6432	83.2892	0	83.2892	87.5454	87.5454
41	2.29211	172.292	-9.68922	FN	0	21	21.5161	23.7163	74.1395	0	74.1395	77.8131	77.8131
42	2.29211	150.552	-9.39213	FN	0	21	18.8342	20.7602	64.8986	0	64.8986	68.014	68.014
43	2.29211	99.009	-9.0953	FN	0	21	12.4079	13.6767	42.7548	0	42.7548	44.7412	44.7412
44	2.29211	79.7379	-8.79871	FN	0	21	10.0103	11.034	34.4934	0	34.4934	36.0428	36.0428
45	2.29211	71.8605	-8.50236	FN	0	21	9.0372	9.96134	31.1402	0	31.1402	32.4912	32.4912
46	2.29211	63.4413	-8.20624	FN	0	21	7.99237	8.80967	27.54	0	27.54	28.6926	28.6926
47	2.29211	54.731	-7.91034	FN	0	21	6.90712	7.61344	23.8004	0	23.8004	24.7601	24.7601
48	2.29211	42.1205	-7.61465	FN	0	21	5.32495	5.86948	18.3487	0	18.3487	19.0605	19.0605
49	2.29211	24.5938	-7.31916	FN	0	21	3.11464	3.43314	10.7323	0	10.7323	11.1324	11.1324
50	2.29211	7.84436	-7.02387	FN	0	21	0.995174	1.09694	3.42914	0	3.42914	3.55175	3.55175

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.08959

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	104.618	97.2891	0	0	0
2	106.695	96.4562	-1.56455	0	0
3	108.773	95.6353	-3.94651	0	0
4	111.065	94.7434	18.6485	0	0
5	113.357	93.866	46.8866	0	0
6	115.649	93.0029	80.9432	0	0
7	117.941	92.1541	120.408	0	0
8	120.234	91.3195	164.701	0	0
9	122.526	90.4989	213.172	0	0
10	124.818	89.6923	265.06	0	0
11	127.11	88.8997	319.269	0	0
12	129.402	88.1209	369.838	0	0
13	131.694	87.3559	-5.18646	0	0
14	133.986	86.6046	33.1874	0	0
15	136.278	85.8669	-313.418	0	0
16	138.57	85.1427	-279.381	0	0
17	140.862	84.4321	-250.639	0	0
18	143.155	83.7348	-226.778	0	0
19	145.447	83.0509	-204.418	0	0
20	147.739	82.3803	-183.086	0	0
21	150.031	81.7229	-162.698	0	0
22	152.323	81.0787	-143.312	0	0
23	154.615	80.4476	-124.93	0	0
24	156.907	79.8296	-107.59	0	0
25	159.199	79.2245	-91.4302	0	0
26	161.491	78.6324	-76.5418	0	0
27	163.784	78.0531	-62.9705	0	0
28	166.076	77.4867	-50.7669	0	0
29	168.368	76.9331	-40.1052	0	0
30	170.66	76.3923	-31.0052	0	0
31	172.952	75.8641	-23.4568	0	0
32	175.244	75.3485	-17.4563	0	0
33	177.536	74.8456	-12.9653	0	0
34	179.828	74.3552	-9.93288	0	0
35	182.12	73.8773	-8.29597	0	0
36	184.413	73.4119	-7.96352	0	0
37	186.705	72.959	-8.84656	0	0
38	188.997	72.5184	-10.8922	0	0
39	191.289	72.0902	-14.062	0	0
40	193.581	71.6743	-18.2833	0	0
41	195.873	71.2707	-23.2993	0	0
42	198.165	70.8793	-28.7	0	0
43	200.457	70.5002	-34.2446	0	0
44	202.749	70.1332	-38.4341	0	0
45	205.042	69.7785	-42.2462	0	0
46	207.334	69.4358	-46.0769	0	0
47	209.626	69.1052	-49.8081	0	0
48	211.918	68.7868	-53.3287	0	0
49	214.21	68.4803	-56.2707	0	0
50	216.502	68.1859	-58.1245	0	0
51	218.794	67.9035	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.10226

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	104.618	97.2891	0	0	0
2	106.695	96.4562	-1.36793	0	0
3	108.773	95.6353	-3.31642	0	0
4	111.065	94.7434	19.8153	0	0
5	113.357	93.866	48.7939	0	0
6	115.649	93.0029	83.7677	0	0
7	117.941	92.1541	124.327	0	0
8	120.234	91.3195	169.889	0	0
9	122.526	90.4989	219.796	0	0
10	124.818	89.6923	273.269	0	0
11	127.11	88.8997	329.176	0	0
12	129.402	88.1209	381.395	0	0
13	131.694	87.3559	14.4062	0	0
14	133.986	86.6046	54.1442	0	0
15	136.278	85.8669	-287.262	0	0
16	138.57	85.1427	-251.895	0	0
17	140.862	84.4321	-221.972	0	0
18	143.155	83.7348	-197.077	0	0
19	145.447	83.0509	-173.691	0	0
20	147.739	82.3803	-151.321	0	0
21	150.031	81.7229	-129.874	0	0
22	152.323	81.0787	-109.411	0	0
23	154.615	80.4476	-89.9301	0	0
24	156.907	79.8296	-71.4697	0	0
25	159.199	79.2245	-54.1713	0	0
26	161.491	78.6324	-38.1317	0	0
27	163.784	78.0531	-23.3972	0	0
28	166.076	77.4867	-10.0204	0	0
29	168.368	76.9331	1.8078	0	0
30	170.66	76.3923	12.0631	0	0
31	172.952	75.8641	20.7525	0	0
32	175.244	75.3485	27.8733	0	0
33	177.536	74.8456	33.4603	0	0
34	179.828	74.3552	37.5601	0	0
35	182.12	73.8773	40.2288	0	0
36	184.413	73.4119	41.5578	0	0
37	186.705	72.959	41.6376	0	0
38	188.997	72.5184	40.5365	0	0
39	191.289	72.0902	38.2957	0	0
40	193.581	71.6743	34.9811	0	0
41	195.873	71.2707	30.8157	0	0
42	198.165	70.8793	26.1719	0	0
43	200.457	70.5002	21.2897	0	0
44	202.749	70.1332	17.5364	0	0
45	205.042	69.7785	14.0762	0	0
46	207.334	69.4358	10.5632	0	0
47	209.626	69.1052	7.11295	0	0
48	211.918	68.7868	3.8351	0	0
49	214.21	68.4803	1.08029	0	0
50	216.502	68.1859	-0.663994	0	0
51	218.794	67.9035	0	0	0

Discharge Sections

Entity Information

◆ Group 1


Shared Entities

Type	Coordinates (x,y)
	1.77636e-14, 113.808
	1.42109e-14, 83.4774
	0, 0
	219.558, 0
	219.558, 47.6476
	219.558, 63.3013
	219.558, 63.4163
	219.558, 67.7028
	218.813, 67.8984
	216.473, 68.5451
	214.378, 69.1796
	213.343, 69.5046
	212, 69.8766
	211.592, 70
	210.79, 70.1608
	202.76, 72
	202.217, 72
	199.979, 73.7621
	199.659, 74
	198.805, 74.2794
	197.721, 74.6883
	196.237, 75.1974
	194.312, 76
	192.006, 76.6366
	188.314, 77.4648
	187.126, 77.7435
	185.957, 78
	181.808, 79.1686
	178.998, 80
	175.781, 80.9083
	171.847, 82
	166.107, 83.5257
	164.266, 84
	163.314, 84.1964
	161, 84.7214
	159.631, 85.0469
	155.495, 86
	154.194, 86.2795
	153.833, 86.3672
	151.968, 86.7768
	149.451, 87.3962
	148.314, 87.6571
	146.918, 88
	143.096, 89.0202

External Boundary	142.518, 89.0416
	136.653, 92.8322
	134.541, 92.864
	126.615, 97.9845
	110.726, 97.7322
	108.389, 97.3499
	98.122, 97.1842
	94.9286, 97.1343
	89.9978, 100.335
	88.3144, 100.508
	83.6606, 101.411
	83.1666, 101.45
	82.8479, 101.363
	81.2326, 101.41
	80.4286, 101.559
	79.4413, 101.61
	79.2651, 101.484
	79.2585, 101.64
	78.9169, 101.722
	78.17, 102
	78.0972, 102
	78.0575, 102.032
	77.8296, 102.294
	77.3706, 102.704
	77.141, 102.861
	76.2213, 103.535
	75.9342, 103.714
	75.7648, 103.702
	75.6642, 103.719
	75.3846, 103.776
	73.8724, 104
	73.6853, 104
	71.8433, 104.257
	68.5474, 104.686
	60.5001, 105.721
	56.4831, 106.212
	54.0248, 106.537
	48.3144, 107.353
	45.6388, 107.727
	43.8159, 108
36.6293, 109.33	
33.1234, 110	
28.9046, 110.978	
24.3103, 112	
21.6524, 112.753	
17.4494, 114	
17.2344, 114.054	
9.52726, 116	
2.45328, 118	
0.0288859, 118.741	
2.13163e-14, 118.749	

Material Boundary	17.2344, 114.054 20.8579, 111.275 26.6018, 108.199 47.2127, 103.172 72.0623, 97.5389 86.8406, 94.0817 111.511, 90.3568 126.233, 87.6027 146.631, 82.6847 170.499, 75.9199 210.288, 65.4939 219.558, 63.4163
Material Boundary	1.42109e-14, 83.4774 46.1115, 74.5405 119.034, 66.4365 194.433, 52.0466 219.558, 47.6476
Material Boundary	94.9286, 97.1343 98.8937, 95.937 114.817, 95.4506 118.323, 93.6882 127.761, 93.1632 139.276, 89.1179 142.518, 89.0416

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	1.77636e-14, 113.808 40.8733, 104.568 60.7485, 100.232 70.8375, 97.7111 112.293, 87.9063 133.984, 82.9655 156.281, 78.5288 191.996, 69.6555 217.975, 63.588 219.558, 63.3013	Assigned to: 
Distributed Load	124.219, 97.9464 110.726, 97.7322 108.389, 97.3499 98.122, 97.1842	Constant DistributionOrientation: Normal to boundaryMagnitude: 6 kN/m2Creates Excess Pore Pressure: No



3+080

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

3+080

Project Summary

File Name:	3+080.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.352s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Left to Right

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	A2+M2+R2	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1.3	
Variable Actions: Favourable	1	
Effective cohesion	1.25	
Coefficient of shearing resistance	1.25	
Undrained strength	1.4	
Weight density	1	
Shear strength (other models)	1.25	
Earth resistance	1.1	
Tensile and plate strength	1.1	
Shear strength	1.1	
Compressive strength	1.1	
Bond strength	1.1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Loading

1 Distributed Load present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	20
Orientation:	Normal to boundary
Load Action:	Live

Materials

AC

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	23
Cohesion [kPa]	100
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

AC alt

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

R

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	20
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1

FN


Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	0
Friction Angle [deg]	21
Water Surface	Water Table
Hu Value	1

Support




pali

Color	
Type	Pile/Micro Pile
Force Application	Passive (Method B)
Force Orientation	Parallel to surface
Out-Of-Plane Spacing	0.6 m
Failure Mode	Shear
Pile Shear Strength	260 kN

Ancoraggio

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	1.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	50 kN/m
Material Dependent	Yes

Bond Strength Dependency

	Material	Bond Strength [kN/m]
	AC alt	79
	R	27
	FN	16

Global Minimums

Method: bishop simplified

	FS	1.265260
Center:		217.035, 259.350
Radius:		189.173
Left Slip Surface Endpoint:		118.516, 97.856
Right Slip Surface Endpoint:		210.176, 70.301
Resisting Moment:		557209 kN-m
Driving Moment:		440392 kN-m
Passive Support Moment:		110950 kN-m
Maximum Single Support Force:		606.061 kN
Total Support Force:		1000 kN
Total Slice Area:		403.323 m ²
Surface Horizontal Width:		91.6605 m
Surface Average Height:		4.40018 m

Method: janbu simplified

	FS	1.273090
Center:		272.793, 511.727
Radius:		447.099
Left Slip Surface Endpoint:		105.032, 97.296
Right Slip Surface Endpoint:		218.807, 67.900
Resisting Horizontal Force:		3776.75 kN
Driving Horizontal Force:		2966.6 kN
Passive Horizontal Support Force:		805.188 kN
Maximum Single Support Force:		606.061 kN
Total Support Force:		1000 kN
Total Slice Area:		535.731 m ²
Surface Horizontal Width:		113.774 m
Surface Average Height:		4.70872 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	25	3.55675	21.4432	3.55675	21.4432	606.061
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	18	3.74949	14.2505	3.74949	14.2505	393.939

Method: janbu simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	25	6.73014	18.2699	6.73014	18.2699	606.061
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
134.541, 92.864	18	6.32252	11.6775	6.32252	11.6775	393.939

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	7882
Number of Invalid Surfaces:	196

Error Codes

Error Code -112 reported for 196 surfaces

Method: janbu simplified

Number of Valid Surfaces:	8078
Number of Invalid Surfaces:	0

Error Code Descriptions

The following errors were encountered during the computation:

-112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi)/F) < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.26526

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	2.00368	24.79	-31.0311	R	0	29.2561	12.1957	15.4307	30.3013	0	30.3013	37.6382	37.6382
2	2.00368	73.7016	-30.3255	R	0	29.2561	20.0709	25.3949	49.8682	0	49.8682	61.6087	61.6087
3	2.00368	121.29	-29.6249	R	0	29.2561	26.5394	33.5793	65.9397	0	65.9397	81.0315	81.0315
4	2.00368	167.584	-28.9291	R	0	29.2561	27.0448	34.2187	67.1952	0	67.1952	82.1427	82.1427
5	1.79263	168.469	-28.2742	FN	0	17.0713	18.3414	23.2067	83.1263	0	83.1263	92.9915	92.9915
6	1.79263	160.721	-27.6594	FN	0	17.0713	17.5498	22.2051	79.5384	0	79.5384	88.7364	88.7364
7	1.79263	152.184	-27.0481	FN	0	17.0713	16.6661	21.087	75.5335	0	75.5335	84.043	84.043
8	1.79263	142.806	-26.4401	FN	0	17.0713	52.7339	66.7221	238.998	0	238.998	265.221	265.221
9	1.79263	138.328	-25.8353	FN	0	17.0713	0.290763	0.367891	1.31778	0	1.31778	1.45857	1.45857
10	1.79263	160.877	-25.2336	FN	0	17.0713	17.769	22.4824	80.5316	0	80.5316	88.9058	88.9058
11	1.79263	157.519	-24.6348	FN	0	17.0713	17.4464	22.0742	79.0695	0	79.0695	87.0699	87.0699
12	1.79263	144.678	-24.0389	FN	0	17.0713	16.0681	20.3303	72.8229	0	72.8229	79.99	79.99
13	1.79263	130.874	-23.4458	FN	0	17.0713	14.5744	18.4404	66.0533	0	66.0533	72.374	72.374
14	1.79263	134.679	-22.8553	FN	0	17.0713	15.0384	19.0275	68.1565	0	68.1565	74.4951	74.4951
15	1.79263	144.408	-22.2673	FN	0	17.0713	16.1676	20.4562	73.274	0	73.274	79.8941	79.8941
16	1.79263	153.231	-21.6818	FN	0	17.0713	17.2006	21.7632	77.9555	0	77.9555	84.7941	84.7941
17	1.79263	162.632	-21.0987	FN	0	17.0713	18.3034	23.1585	82.954	0	82.954	90.0162	90.0162
18	1.79263	171.335	-20.5179	FN	0	17.0713	19.3327	24.4609	87.6189	0	87.6189	94.854	94.854
19	1.79263	179.55	-19.9392	FN	0	17.0713	20.3115	25.6993	92.0548	0	92.0548	99.4232	99.4232
20	1.79263	187.983	-19.3627	FN	0	17.0713	21.3193	26.9745	96.6228	0	96.6228	104.115	104.115
21	1.79263	195.72	-18.7882	FN	0	17.0713	22.2527	28.1555	100.853	0	100.853	108.423	108.423
22	1.79263	202.264	-18.2157	FN	0	17.0713	23.0542	29.1695	104.485	0	104.485	112.072	112.072
23	1.79263	208.036	-17.645	FN	0	17.0713	23.7708	30.0763	107.733	0	107.733	115.294	115.294
24	1.79263	212.978	-17.0761	FN	0	17.0713	24.3955	30.8666	110.564	0	110.564	118.058	118.058
25	1.79263	217.806	-16.509	FN	0	17.0713	25.0094	31.6434	113.347	0	113.347	120.759	120.759
26	2.55658	316.235	-15.8234	FN	0	17.0713	25.5361	32.3098	115.733	0	115.733	122.971	122.971
27	1.81017	225.066	-15.137	FN	0	17.0713	25.7435	32.5722	116.674	0	116.674	123.638	123.638
28	1.81017	225.03	-14.5698	FN	0	17.0713	25.8016	32.6457	116.937	0	116.937	123.643	123.643
29	1.81017	224.307	-14.0041	FN	0	17.0713	25.7807	32.6193	116.842	0	116.842	123.272	123.272
30	1.81017	222.432	-13.4397	FN	0	17.0713	25.6264	32.4241	116.143	0	116.143	122.267	122.267
31	1.81017	219.637	-12.8766	FN	0	17.0713	25.3647	32.0929	114.957	0	114.957	120.755	120.755
32	1.81017	216.028	-12.3149	FN	0	17.0713	25.0071	31.6405	113.336	0	113.336	118.795	118.795
33	1.81017	211.59	-11.7543	FN	0	17.0713	24.5512	31.0637	111.27	0	111.27	116.379	116.379
34	1.81017	205.915	-11.1948	FN	0	17.0713	23.949	30.3017	108.541	0	108.541	113.281	113.281
35	1.81017	199.537	-10.6365	FN	0	17.0713	23.2616	29.432	105.425	0	105.425	109.794	109.794
36	1.81017	193.169	-10.0791	FN	0	17.0713	22.572	28.5595	102.3	0	102.3	106.312	106.312
37	1.81017	186.498	-9.52273	FN	0	17.0713	21.8433	27.6374	98.9969	0	98.9969	102.661	102.661
38	1.81017	181.856	-8.96726	FN	0	17.0713	21.3492	27.0123	96.7577	0	96.7577	100.127	100.127
39	1.81017	177.046	-8.41263	FN	0	17.0713	20.8327	26.3588	94.4172	0	94.4172	97.4982	97.4982
40	1.81017	171.844	-7.85879	FN	0	17.0713	20.2674	25.6435	91.8553	0	91.8553	94.6528	94.6528
41	1.81017	164.24	-7.30569	FN	0	17.0713	19.4155	24.5656	87.9936	0	87.9936	90.4828	90.4828
42	1.81017	151.854	-6.75328	FN	0	17.0713	17.9927	22.7654	81.5458	0	81.5458	83.6764	83.6764
43	1.81017	133.877	-6.20149	FN	0	17.0713	15.8992	20.1166	72.0575	0	72.0575	73.7851	73.7851
44	1.81017	117.657	-5.65028	FN	0	17.0713	14.0052	17.7202	63.4737	0	63.4737	64.8593	64.8593
45	1.81017	92.6644	-5.0996	FN	0	17.0713	11.0556	13.9882	50.1057	0	50.1057	51.0923	51.0923
46	1.81017	52.3173	-4.54939	FN	0	17.0713	6.25625	7.91578	28.3543	0	28.3543	28.8521	28.8521
47	1.81017	39.2711	-3.99959	FN	0	17.0713	4.70696	5.95553	21.3327	0	21.3327	21.6618	21.6618
48	1.81017	28.7968	-3.45017	FN	0	17.0713	3.45949	4.37715	15.6789	0	15.6789	15.8875	15.8875
49	1.81017	17.7077	-2.90107	FN	0	17.0713	2.1322	2.69779	9.66349	0	9.66349	9.77155	9.77155
50	1.81017	6.00479	-2.35223	FN	0	17.0713	0.724712	0.916949	3.28451	0	3.28451	3.31428	3.31428

Global Minimum Query (janbu simplified) - Safety Factor: 1.27309

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	2.0987	18.4107	-21.893	R	0	29.2561	11.8226	15.0512	29.5561	0	29.5561	34.3071	34.3071
2	2.0987	56.0155	-21.6035	R	0	29.2561	17.954	22.8571	44.8845	0	44.8845	51.9943	51.9943
3	2.28285	112.666	-21.3018	FN	0	17.0713	15.1059	19.2312	68.8863	0	68.8863	74.7764	74.7764
4	2.28285	157.012	-20.9882	FN	0	17.0713	19.0265	24.2225	86.7647	0	86.7647	94.0638	94.0638
5	2.28285	197.602	-20.6751	FN	0	17.0713	22.627	28.8062	103.184	0	103.184	111.723	111.723
6	2.28285	238.477	-20.3628	FN	0	17.0713	26.2624	33.4344	119.762	0	119.762	129.509	129.509
7	2.28285	278.244	-20.051	FN	0	17.0713	29.8098	37.9505	135.939	0	135.939	146.819	146.819
8	2.28285	316.822	-19.7399	FN	0	17.0713	33.2614	42.3447	151.679	0	151.679	163.614	163.614
9	2.28285	354.778	-19.4294	FN	0	17.0713	34.3864	43.777	156.809	0	156.809	168.938	168.938
10	2.28285	387.013	-19.1195	FN	0	17.0713	34.3122	43.6825	156.471	0	156.471	168.365	168.365
11	2.28285	368.111	-18.8101	FN	0	17.0713	62.3877	79.4252	284.501	0	284.501	305.752	305.752
12	2.28285	335.997	-18.5014	FN	0	17.0713	29.8691	38.026	136.209	0	136.209	146.204	146.204
13	2.28285	303.28	-18.1932	FN	0	17.0713	26.9965	34.369	123.11	0	123.11	131.982	131.982
14	2.28285	297.339	-17.8855	FN	0	17.0713	18.0481	22.9768	82.3026	0	82.3026	88.1269	88.1269
15	2.28285	296.854	-17.5783	FN	0	17.0713	26.4945	33.7299	120.821	0	120.821	129.214	129.214
16	2.28285	262.004	-17.2717	FN	0	17.0713	23.4149	29.8093	106.777	0	106.777	114.057	114.057
17	2.28285	231.252	-16.9656	FN	0	17.0713	20.6938	26.3451	94.3678	0	94.3678	100.681	100.681
18	2.28285	232.232	-16.66	FN	0	17.0713	20.8087	26.4913	94.8919	0	94.8919	101.119	101.119
19	2.28285	235.486	-16.3549	FN	0	17.0713	21.1277	26.8975	96.3469	0	96.3469	102.547	102.547
20	2.28285	240.284	-16.0502	FN	0	17.0713	21.5861	27.4811	98.4374	0	98.4374	104.648	104.648
21	2.28285	244.637	-15.746	FN	0	17.0713	22.0057	28.0152	100.35	0	100.35	106.555	106.555
22	2.28285	249.856	-15.4423	FN	0	17.0713	22.5041	28.6498	102.624	0	102.624	108.84	108.84
23	2.28285	255.032	-15.139	FN	0	17.0713	22.9999	29.2809	104.884	0	104.884	111.107	111.107
24	2.28285	258.88	-14.8362	FN	0	17.0713	23.3768	29.7608	106.603	0	106.603	112.795	112.795
25	2.28285	261.834	-14.5337	FN	0	17.0713	23.6738	30.1389	107.957	0	107.957	114.095	114.095
26	2.28285	264.688	-14.2317	FN	0	17.0713	23.9623	30.5062	109.273	0	109.273	115.351	115.351
27	2.28285	266.632	-13.9301	FN	0	17.0713	24.169	30.7693	110.216	0	110.216	116.21	116.21
28	2.28285	264.919	-13.6289	FN	0	17.0713	24.0443	30.6105	109.646	0	109.646	115.476	115.476
29	2.28285	262.267	-13.3281	FN	0	17.0713	23.8336	30.3423	108.686	0	108.686	114.332	114.332
30	2.28285	258.856	-13.0276	FN	0	17.0713	23.5533	29.9855	107.408	0	107.408	112.858	112.858
31	2.28285	253.996	-12.7275	FN	0	17.0713	23.1402	29.4595	105.524	0	105.524	110.75	110.75
32	2.28285	248.291	-12.4277	FN	0	17.0713	22.6488	28.834	103.283	0	103.283	108.274	108.274
33	2.28285	241.592	-12.1284	FN	0	17.0713	22.0654	28.0912	100.623	0	100.623	105.364	105.364
34	2.28285	233.332	-11.8293	FN	0	17.0713	21.3376	27.1647	97.3037	0	97.3037	101.773	101.773
35	2.28285	225.263	-11.5306	FN	0	17.0713	20.6254	26.258	94.0561	0	94.0561	98.2639	98.2639
36	2.28285	217.577	-11.2321	FN	0	17.0713	19.9465	25.3937	90.9603	0	90.9603	94.9214	94.9214
37	2.28285	213.485	-10.934	FN	0	17.0713	19.5957	24.9471	89.3602	0	89.3602	93.1458	93.1458
38	2.28285	209.843	-10.6362	FN	0	17.0713	19.2853	24.5519	87.9449	0	87.9449	91.5666	91.5666
39	2.28285	204.418	-10.3387	FN	0	17.0713	18.81	23.9468	85.7774	0	85.7774	89.2089	89.2089
40	2.28285	190.996	-10.0415	FN	0	17.0713	17.5967	22.4022	80.2444	0	80.2444	83.3603	83.3603
41	2.28285	169.725	-9.74449	FN	0	17.0713	15.6562	19.9318	71.3957	0	71.3957	74.0844	74.0844
42	2.28285	147.694	-9.44779	FN	0	17.0713	13.6408	17.366	62.2047	0	62.2047	64.4746	64.4746
43	2.28285	96.2225	-9.15135	FN	0	17.0713	8.89788	11.3278	40.5763	0	40.5763	42.0096	42.0096
44	2.28285	78.52	-8.85515	FN	0	17.0713	7.26985	9.25517	33.152	0	33.152	34.2846	34.2846
45	2.28285	70.8086	-8.55919	FN	0	17.0713	6.56393	8.35648	29.9329	0	29.9329	30.9208	30.9208
46	2.28285	62.5606	-8.26346	FN	0	17.0713	5.80646	7.39215	26.4787	0	26.4787	27.322	27.322
47	2.28285	54.0246	-7.96795	FN	0	17.0713	5.02035	6.39136	22.8938	0	22.8938	23.5966	23.5966
48	2.28285	41.5103	-7.67265	FN	0	17.0713	3.86216	4.91688	17.6122	0	17.6122	18.1326	18.1326
49	2.28285	24.2107	-7.37756	FN	0	17.0713	2.25535	2.87126	10.2848	0	10.2848	10.5769	10.5769
50	2.28285	7.7282	-7.08267	FN	0	17.0713	0.720799	0.917642	3.28699	0	3.28699	3.37655	3.37655

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.26526

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	118.516	97.8559	0	0	0
2	120.519	96.6505	12.9155	0	0
3	122.523	95.4784	31.9732	0	0
4	124.527	94.339	54.6264	0	0
5	126.53	93.2316	74.8485	0	0
6	128.323	92.2674	122.117	0	0
7	130.116	91.3279	165.385	0	0
8	131.908	90.4126	204.642	0	0
9	133.701	89.5212	-16.9207	0	0
10	135.493	88.6532	-296.53	0	0
11	137.286	87.8084	-260.348	0	0
12	139.079	86.9863	-226.626	0	0
13	140.871	86.1867	-197.202	0	0
14	142.664	85.4093	-171.977	0	0
15	144.457	84.6537	-147.438	0	0
16	146.249	83.9197	-122.638	0	0
17	148.042	83.207	-97.9131	0	0
18	149.834	82.5153	-73.3489	0	0
19	151.627	81.8444	-49.2255	0	0
20	153.42	81.1941	-25.7737	0	0
21	155.212	80.5642	-3.12326	0	0
22	157.005	79.9543	18.4892	0	0
23	158.798	79.3644	38.7987	0	0
24	160.59	78.7942	57.6146	0	0
25	162.383	78.2435	74.7648	0	0
26	164.175	77.7122	90.1522	0	0
27	166.732	76.9876	108.721	0	0
28	168.542	76.498	119.252	0	0
29	170.352	76.0275	127.563	0	0
30	172.163	75.576	133.643	0	0
31	173.973	75.1434	137.493	0	0
32	175.783	74.7296	139.147	0	0
33	177.593	74.3344	138.665	0	0
34	179.403	73.9578	136.132	0	0
35	181.213	73.5995	131.663	0	0
36	183.024	73.2596	125.394	0	0
37	184.834	72.9378	117.449	0	0
38	186.644	72.6342	107.969	0	0
39	188.454	72.3485	96.9595	0	0
40	190.264	72.0808	84.5237	0	0
41	192.074	71.831	70.7851	0	0
42	193.885	71.5989	56.0592	0	0
43	195.695	71.3845	40.9676	0	0
44	197.505	71.1878	26.3595	0	0
45	199.315	71.0087	12.3744	0	0
46	201.125	70.8472	0.45514	0	0
47	202.935	70.7032	-6.78623	0	0
48	204.746	70.5766	-12.607	0	0
49	206.556	70.4675	-17.1584	0	0
50	208.366	70.3757	-20.1317	0	0
51	210.176	70.3014	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.27309

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	105.032	97.2958	0	0	0
2	107.131	96.4524	1.04167	0	0
3	109.23	95.6213	4.8372	0	0
4	111.513	94.7312	38.4235	0	0
5	113.795	93.8554	71.9975	0	0
6	116.078	92.9939	110.273	0	0
7	118.361	92.1466	152.848	0	0
8	120.644	91.3134	199.129	0	0
9	122.927	90.4943	248.534	0	0
10	125.21	89.689	296.982	0	0
11	127.493	88.8976	342.626	0	0
12	129.775	88.12	83.7102	0	0
13	132.058	87.3562	119.7	0	0
14	134.341	86.6059	150.55	0	0
15	136.624	85.8692	-124.424	0	0
16	138.907	85.146	-97.415	0	0
17	141.19	84.4362	-74.9788	0	0
18	143.472	83.7397	-56.4101	0	0
19	145.755	83.0566	-38.9993	0	0
20	148.038	82.3867	-22.5957	0	0
21	150.321	81.7299	-7.13198	0	0
22	152.604	81.0862	7.3174	0	0
23	154.887	80.4556	20.7554	0	0
24	157.17	79.838	33.1273	0	0
25	159.452	79.2333	44.3235	0	0
26	161.735	78.6415	54.2717	0	0
27	164.018	78.0625	62.9397	0	0
28	166.301	77.4963	70.2746	0	0
29	168.584	76.9428	76.1767	0	0
30	170.867	76.4019	80.6494	0	0
31	173.15	75.8737	83.7132	0	0
32	175.432	75.3581	85.3956	0	0
33	177.715	74.855	85.7474	0	0
34	179.998	74.3645	84.8329	0	0
35	182.281	73.8863	82.7369	0	0
36	184.564	73.4206	79.5436	0	0
37	186.847	72.9673	75.33	0	0
38	189.13	72.5263	70.0884	0	0
39	191.412	72.0975	63.8485	0	0
40	193.695	71.6811	56.7106	0	0
41	195.978	71.2768	49.0522	0	0
42	198.261	70.8848	41.3678	0	0
43	200.544	70.5049	33.9162	0	0
44	202.827	70.1372	28.5634	0	0
45	205.11	69.7815	23.789	0	0
46	207.392	69.4379	19.1169	0	0
47	209.675	69.1064	14.6652	0	0
48	211.958	68.7869	10.5411	0	0
49	214.241	68.4793	7.1573	0	0
50	216.524	68.1837	5.05828	0	0
51	218.807	67.9001	0	0	0

Discharge Sections

Entity Information

◆ Group 1





Shared Entities

Type	Coordinates (x,y)
	1.77636e-14, 113.808
	1.42109e-14, 83.4774
	0, 0
	219.558, 0
	219.558, 47.6476
	219.558, 63.3013
	219.558, 63.4163
	219.558, 67.7028
	218.813, 67.8984
	216.473, 68.5451
	214.378, 69.1796
	213.343, 69.5046
	212, 69.8766
	211.592, 70
	210.79, 70.1608
	202.76, 72
	202.217, 72
	199.979, 73.7621
	199.659, 74
	198.805, 74.2794
	197.721, 74.6883
	196.237, 75.1974
	194.312, 76
	192.006, 76.6366
	188.314, 77.4648
	187.126, 77.7435
	185.957, 78
	181.808, 79.1686
	178.998, 80
	175.781, 80.9083
	171.847, 82
	166.107, 83.5257
	164.266, 84
	163.314, 84.1964
	161, 84.7214
	159.631, 85.0469
	155.495, 86
	154.194, 86.2795
	153.833, 86.3672
	151.968, 86.7768
	149.451, 87.3962
	148.314, 87.6571
	146.918, 88
	143.096, 89.0202

External Boundary	142.518, 89.0416
	136.653, 92.8322
	134.541, 92.864
	126.615, 97.9845
	110.726, 97.7322
	108.389, 97.3499
	98.122, 97.1842
	94.9286, 97.1343
	89.9978, 100.335
	88.3144, 100.508
	83.6606, 101.411
	83.1666, 101.45
	82.8479, 101.363
	81.2326, 101.41
	80.4286, 101.559
	79.4413, 101.61
	79.2651, 101.484
	79.2585, 101.64
	78.9169, 101.722
	78.17, 102
	78.0972, 102
	78.0575, 102.032
	77.8296, 102.294
	77.3706, 102.704
	77.141, 102.861
	76.2213, 103.535
	75.9342, 103.714
	75.7648, 103.702
	75.6642, 103.719
	75.3846, 103.776
	73.8724, 104
	73.6853, 104
	71.8433, 104.257
	68.5474, 104.686
	60.5001, 105.721
	56.4831, 106.212
	54.0248, 106.537
	48.3144, 107.353
	45.6388, 107.727
	43.8159, 108
	36.6293, 109.33
33.1234, 110	
28.9046, 110.978	
24.3103, 112	
21.6524, 112.753	
17.4494, 114	
17.2344, 114.054	
9.52726, 116	
2.45328, 118	
0.0288859, 118.741	
2.13163e-14, 118.749	

Material Boundary	17.2344, 114.054 20.8579, 111.275 26.6018, 108.199 47.2127, 103.172 72.0623, 97.5389 86.8406, 94.0817 111.511, 90.3568 126.233, 87.6027 146.631, 82.6847 170.499, 75.9199 210.288, 65.4939 219.558, 63.4163
Material Boundary	1.42109e-14, 83.4774 46.1115, 74.5405 119.034, 66.4365 194.433, 52.0466 219.558, 47.6476
Material Boundary	94.9286, 97.1343 98.8937, 95.937 114.817, 95.4506 118.323, 93.6882 127.761, 93.1632 139.276, 89.1179 142.518, 89.0416

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	1.77636e-14, 113.808 40.8733, 104.568 60.7485, 100.232 70.8375, 97.7111 112.293, 87.9063 133.984, 82.9655 156.281, 78.5288 191.996, 69.6555 217.975, 63.588 219.558, 63.3013	Assigned to:  AC  AC alt  R  FN
Distributed Load	124.219, 97.9464 110.726, 97.7322 108.389, 97.3499 98.122, 97.1842	Constant DistributionOrientation: Normal to boundaryMagnitude: 20 kN/m2Creates Excess Pore Pressure: No



3+375 - sisma

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

3+375 - sisma

Project Summary

File Name:	3+375 - sisma.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.421s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Right to Left

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	M1+R2 fronti scavo sisma	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1	
Variable Actions: Favourable	1	
Effective cohesion	1	
Coefficient of shearing resistance	1	
Undrained strength	1	
Weight density	1	
Shear strength (other models)	1	
Earth resistance	1.2	
Tensile and plate strength	1	
Shear strength	1	
Compressive strength	1	
Bond strength	1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth [m]:	5
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.091
Seismic Load Coefficient (Vertical):	0.045

Loading

2 Distributed Loads present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	6
Orientation:	Normal to boundary
Load Action:	Live

Distributed Load 2

Distribution:	Constant
Magnitude [kPa]:	6
Orientation:	Normal to boundary
Load Action:	Live

Materials

AC

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	23
Cohesion [kPa]	100
Friction Angle [deg]	27
Water Surface	Water Table
Hu Value	1

AC alt

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

R

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	20
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1

FN

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	0
Friction Angle [deg]	20
Water Surface	Water Table
Hu Value	1

Support




pali

Color	
Type	Pile/Micro Pile
Force Application	Passive (Method B)
Force Orientation	Parallel to surface
Out-Of-Plane Spacing	0.5 m
Failure Mode	Shear
Pile Shear Strength	250 kN

Ancoraggio

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	1.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	50 kN/m
Material Dependent	Yes

Bond Strength Dependency

	Material	Bond Strength [kN/m]
	AC alt	80
	R	27
	FN	17

Global Minimums

Method: bishop simplified

FS	1.194910
Center:	91.419, 162.017
Radius:	93.271
Left Slip Surface Endpoint:	81.716, 69.252
Right Slip Surface Endpoint:	147.535, 87.515
Resisting Moment:	234430 kN-m
Driving Moment:	196191 kN-m
Passive Support Moment:	66776.1 kN-m
Maximum Single Support Force:	666.667 kN
Total Support Force:	1166.67 kN
Total Slice Area:	281.8 m ²
Surface Horizontal Width:	65.8185 m
Surface Average Height:	4.28148 m

Method: janbu simplified

FS	1.192270
Center:	91.419, 162.017
Radius:	93.271
Left Slip Surface Endpoint:	81.716, 69.252
Right Slip Surface Endpoint:	147.535, 87.515
Resisting Horizontal Force:	2618.62 kN
Driving Horizontal Force:	2196.34 kN
Passive Horizontal Support Force:	930.047 kN
Maximum Single Support Force:	666.667 kN
Total Support Force:	1166.67 kN
Total Slice Area:	281.8 m ²
Surface Horizontal Width:	65.8185 m
Surface Average Height:	4.28148 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 2						
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	18.0036	5.30141	12.7022	5.30141	12.7022	500
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	20.0212	5.12446	14.8968	5.12446	14.8968	666.667

Method: janbu simplified

Number of Supports: 2						
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	18.0036	5.30141	12.7022	5.30141	12.7022	500
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	20.0212	5.12446	14.8968	5.12446	14.8968	666.667

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	5170
Number of Invalid Surfaces:	24

Error Codes

Error Code -112 reported for 24 surfaces

Method: janbu simplified

Number of Valid Surfaces:	5193
Number of Invalid Surfaces:	1

Error Codes

Error Code -108 reported for 1 surface

Error Code Descriptions

The following errors were encountered during the computation:

- 108 = Total driving moment or total driving force < 0.1. This is to limit the calculation of extremely high safety factors if the driving force is very small (0.1 is an arbitrary number).
- 112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi))/F < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.19491

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	1.33439	0.975105	-5.55914	FN	0	20	0.199778	0.238717	0.787041	0	0.787041	0.767596	0.767596
2	1.33439	2.91579	-4.73609	FN	0	20	0.59467	0.710577	2.34275	0	2.34275	2.29348	2.29348
3	1.33439	12.2445	-3.91402	FN	0	20	2.486	2.97055	9.79382	0	9.79382	9.62373	9.62373
4	1.33439	23.6365	-3.09275	FN	0	20	4.77747	5.70865	18.8213	0	18.8213	18.5631	18.5631
5	1.33439	34.6406	-2.27212	FN	0	20	6.97055	8.32918	27.4611	0	27.4611	27.1846	27.1846
6	1.33439	48.9126	-1.45196	FN	0	20	9.79898	11.7089	38.604	0	38.604	38.3556	38.3556
7	1.33439	65.4479	-0.632091	FN	0	20	13.054	15.5984	51.4276	0	51.4276	51.2836	51.2836
8	1.33439	81.8941	0.187646	FN	0	20	16.2631	19.4329	64.0697	0	64.0697	64.1229	64.1229
9	1.33439	97.6476	1.00742	FN	0	20	19.3071	23.0703	76.0621	0	76.0621	76.4016	76.4016
10	1.33439	106.538	1.8274	FN	0	20	20.9736	25.0616	82.6274	0	82.6274	83.2965	83.2965
11	1.33439	112.587	2.64776	FN	0	20	22.0687	26.3701	86.9418	0	86.9418	87.9624	87.9624
12	1.33439	118.137	3.46866	FN	0	20	23.0569	27.5509	90.8346	0	90.8346	92.2322	92.2322
13	1.33439	123.189	4.29027	FN	0	20	23.9392	28.6052	94.311	0	94.311	96.1069	96.1069
14	1.33439	127.739	5.11277	FN	0	20	24.7168	29.5343	97.3735	0	97.3735	99.585	99.585
15	1.33439	131.786	5.93633	FN	0	20	25.3904	30.3392	100.027	0	100.027	102.668	102.668
16	1.33439	135.015	6.76112	FN	0	20	25.9006	30.9489	102.037	0	102.037	105.108	105.108
17	1.33439	137.857	7.58732	FN	0	20	26.3321	31.4645	103.738	0	103.738	107.245	107.245
18	1.33439	140.786	8.41511	FN	0	20	26.7758	31.9947	105.486	0	105.486	109.447	109.447
19	1.33439	142.326	9.24468	FN	0	20	26.9518	32.205	106.179	0	106.179	110.566	110.566
20	1.33439	143.195	10.0762	FN	0	20	26.9989	32.2613	106.365	0	106.365	111.162	111.162
21	1.33439	143.158	10.9099	FN	0	20	26.8747	32.1129	105.875	0	105.875	111.055	111.055
22	1.33439	142.568	11.7459	FN	0	20	26.6474	31.8412	104.98	0	104.98	110.521	110.521
23	1.33439	141.303	12.5845	FN	0	20	26.2952	31.4204	103.592	0	103.592	109.463	109.463
24	1.33439	138.723	13.4258	FN	0	20	25.7013	30.7108	101.253	0	101.253	107.388	107.388
25	0.360952	36.8887	13.9614	FN	0	20	25.1947	30.1054	99.2566	0	99.2566	105.52	105.52
26	1.34741	134.364	14.5031	FN	0	20	24.5138	29.2918	96.5744	0	96.5744	102.915	102.915
27	1.34741	128.394	15.3598	FN	0	20	23.3188	27.8639	91.8668	0	91.8668	98.2722	98.2722
28	1.34741	124.312	16.22	FN	0	20	22.4747	26.8553	88.5408	0	88.5408	95.0789	95.0789
29	1.34741	121.264	17.0839	FN	0	20	21.8231	26.0767	85.9737	0	85.9737	92.6807	92.6807
30	1.34741	116.965	17.9519	FN	0	20	20.9519	25.0356	82.5418	0	82.5418	89.33	89.33
31	1.34741	121.714	18.8242	FN	0	20	21.7005	25.9302	85.4913	0	85.4913	92.889	92.889
32	1.34741	133.245	19.701	FN	0	20	23.6441	28.2526	93.1482	0	93.1482	101.614	101.614
33	1.34741	143.993	20.5827	FN	0	20	25.4289	30.3853	100.18	0	100.18	109.729	109.729
34	1.34741	154.059	21.4695	FN	0	20	27.0748	32.352	106.664	0	106.664	117.312	117.312
35	1.34741	158.443	22.3617	FN	0	20	27.7086	33.1093	109.16	0	109.16	120.559	120.559
36	1.34741	144.933	23.2597	FN	0	20	0	0	-10.6253	0	-10.6253	-10.6253	-10.6253
37	1.34741	144.689	24.1637	FN	0	20	25.0498	29.9322	98.6853	0	98.6853	109.924	109.924
38	1.34741	152.263	25.0742	FN	0	20	26.2256	31.3372	103.318	0	103.318	115.589	115.589
39	1.34741	159.227	25.9916	FN	0	20	92.2714	110.256	363.511	0	363.511	408.498	408.498
40	1.34741	165.449	26.9161	FN	0	20	28.1966	33.6924	111.083	0	111.083	125.398	125.398
41	1.34741	170.948	27.8483	FN	0	20	28.9757	34.6233	114.152	0	114.152	129.461	129.461
42	1.34741	171.43	28.7886	FN	0	20	28.8964	34.5286	113.84	0	113.84	129.718	129.718
43	1.34741	154.045	29.7375	FN	0	20	26.3057	31.433	103.634	0	103.634	118.661	118.661
44	1.34741	135.505	30.6954	FN	0	20	23.8692	28.5215	94.0345	0	94.0345	108.204	108.204
45	1.34741	116.516	31.6629	FN	0	20	20.5821	24.5937	81.0845	0	81.0845	93.7778	93.7778
46	1.34741	96.6966	32.6406	FN	0	20	17.1938	20.545	67.7365	0	67.7365	78.7495	78.7495
47	1.34741	76.0204	33.6291	FN	0	20	13.7035	16.3744	53.986	0	53.986	63.1006	63.1006
48	1.34741	54.4578	34.6291	FN	0	20	10.1102	12.0808	39.83	0	39.83	46.8122	46.8122
49	1.22092	29.7138	35.5932	R	0	35	10.8035	12.9092	22.1235	0	22.1235	29.8561	29.8561
50	1.22092	10.0277	36.521	R	0	35	4.96134	5.92836	10.1599	0	10.1599	13.8339	13.8339

Global Minimum Query (janbu simplified) - Safety Factor: 1.19227

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	1.33439	0.975105	-5.55914	FN	0	20	0.200214	0.238709	0.787018	0	0.787018	0.767531	0.767531
2	1.33439	2.91579	-4.73609	FN	0	20	0.595972	0.710559	2.34269	0	2.34269	2.29332	2.29332
3	1.33439	12.2445	-3.91402	FN	0	20	2.49145	2.97048	9.79359	0	9.79359	9.62313	9.62313
4	1.33439	23.6365	-3.09275	FN	0	20	4.78797	5.70855	18.8209	0	18.8209	18.5622	18.5622
5	1.33439	34.6406	-2.27212	FN	0	20	6.9859	8.32908	27.4607	0	27.4607	27.1836	27.1836
6	1.33439	48.9126	-1.45196	FN	0	20	9.82059	11.7088	38.6037	0	38.6037	38.3548	38.3548
7	1.33439	65.4479	-0.632091	FN	0	20	13.0829	15.5984	51.4274	0	51.4274	51.2831	51.2831
8	1.33439	81.8941	0.187646	FN	0	20	16.2991	19.4329	64.0697	0	64.0697	64.1231	64.1231
9	1.33439	97.6476	1.00742	FN	0	20	19.35	23.0704	76.0629	0	76.0629	76.4031	76.4031
10	1.33439	106.538	1.8274	FN	0	20	21.0202	25.0618	82.6281	0	82.6281	83.2988	83.2988
11	1.33439	112.587	2.64776	FN	0	20	22.1179	26.3705	86.9425	0	86.9425	87.9654	87.9654
12	1.33439	118.137	3.46866	FN	0	20	23.1084	27.5514	90.8361	0	90.8361	92.2368	92.2368
13	1.33439	123.189	4.29027	FN	0	20	23.9928	28.6059	94.3132	0	94.3132	96.1132	96.1132
14	1.33439	127.739	5.11277	FN	0	20	24.7722	29.5351	97.3765	0	97.3765	99.5929	99.5929
15	1.33439	131.786	5.93633	FN	0	20	25.4473	30.3401	100.03	0	100.03	102.676	102.676
16	1.33439	135.015	6.76112	FN	0	20	25.9589	30.95	102.041	0	102.041	105.119	105.119
17	1.33439	137.857	7.58732	FN	0	20	26.3914	31.4657	103.741	0	103.741	107.257	107.257
18	1.33439	140.786	8.41511	FN	0	20	26.8363	31.9961	105.49	0	105.49	109.46	109.46
19	1.33439	142.326	9.24468	FN	0	20	27.0128	32.2065	106.184	0	106.184	110.581	110.581
20	1.33439	143.195	10.0762	FN	0	20	27.0601	32.263	106.37	0	106.37	111.179	111.179
21	1.33439	143.158	10.9099	FN	0	20	26.9358	32.1147	105.881	0	105.881	111.073	111.073
22	1.33439	142.568	11.7459	FN	0	20	26.708	31.8432	104.986	0	104.986	110.539	110.539
23	1.33439	141.303	12.5845	FN	0	20	26.3551	31.4224	103.599	0	103.599	109.483	109.483
24	1.33439	138.723	13.4258	FN	0	20	25.7601	30.713	101.26	0	101.26	107.409	107.409
25	0.360952	36.8887	13.9614	FN	0	20	25.2523	30.1076	99.2639	0	99.2639	105.542	105.542
26	1.34741	134.364	14.5031	FN	0	20	24.5699	29.294	96.5815	0	96.5815	102.937	102.937
27	1.34741	128.394	15.3598	FN	0	20	23.3723	27.8661	91.8739	0	91.8739	98.2941	98.2941
28	1.34741	124.312	16.22	FN	0	20	22.5264	26.8575	88.5487	0	88.5487	95.1017	95.1017
29	1.34741	121.264	17.0839	FN	0	20	21.8733	26.0789	85.9815	0	85.9815	92.7039	92.7039
30	1.34741	116.965	17.9519	FN	0	20	21.0002	25.0379	82.5495	0	82.5495	89.3534	89.3534
31	1.34741	121.714	18.8242	FN	0	20	21.7507	25.9327	85.4997	0	85.4997	92.9145	92.9145
32	1.34741	133.245	19.701	FN	0	20	23.6989	28.2555	93.1573	0	93.1573	101.643	101.643
33	1.34741	143.993	20.5827	FN	0	20	25.4879	30.3885	100.19	0	100.19	109.762	109.762
34	1.34741	154.059	21.4695	FN	0	20	27.1377	32.3555	106.675	0	106.675	117.348	117.348
35	1.34741	158.443	22.3617	FN	0	20	27.7732	33.1131	109.173	0	109.173	120.599	120.599
36	1.34741	144.933	23.2597	FN	0	20	0	0	-10.4993	0	-10.4993	-10.4993	-10.4993
37	1.34741	144.689	24.1637	FN	0	20	25.1083	29.9359	98.6975	0	98.6975	109.963	109.963
38	1.34741	152.263	25.0742	FN	0	20	26.287	31.3412	103.331	0	103.331	115.63	115.63
39	1.34741	159.227	25.9916	FN	0	20	92.4212	110.191	363.297	0	363.297	408.357	408.357
40	1.34741	165.449	26.9161	FN	0	20	28.263	33.6971	111.098	0	111.098	125.447	125.447
41	1.34741	170.948	27.8483	FN	0	20	29.044	34.6283	114.169	0	114.169	129.513	129.513
42	1.34741	171.43	28.7886	FN	0	20	28.9647	34.5337	113.857	0	113.857	129.773	129.773
43	1.34741	154.045	29.7375	FN	0	20	26.368	31.4378	103.649	0	103.649	118.712	118.712
44	1.34741	135.505	30.6954	FN	0	20	23.9258	28.526	94.0492	0	94.0492	108.253	108.253
45	1.34741	116.516	31.6629	FN	0	20	20.631	24.5977	81.0977	0	81.0977	93.8212	93.8212
46	1.34741	96.6966	32.6406	FN	0	20	17.2348	20.5485	67.7478	0	67.7478	78.7871	78.7871
47	1.34741	76.0204	33.6291	FN	0	20	13.7362	16.3773	53.9954	0	53.9954	63.1318	63.1318
48	1.34741	54.4578	34.6291	FN	0	20	10.1344	12.083	39.8372	0	39.8372	46.8361	46.8361
49	1.22092	29.7138	35.5932	R	0	35	10.8307	12.9131	22.1302	0	22.1302	29.8823	29.8823
50	1.22092	10.0277	36.521	R	0	35	4.97387	5.9302	10.163	0	10.163	13.8463	13.8463

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.19491

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	81.7163	69.2517	0	0	0
2	83.0507	69.1218	0.28092	0	0
3	84.3851	69.0113	1.07064	0	0
4	85.7195	68.92	4.17846	0	0
5	87.0539	68.8479	9.77994	0	0
6	88.3883	68.7949	17.4128	0	0
7	89.7227	68.7611	27.3849	0	0
8	91.0571	68.7464	39.6613	0	0
9	92.3914	68.7507	53.6997	0	0
10	93.7258	68.7742	68.8747	0	0
11	95.0602	68.8168	83.7386	0	0
12	96.3946	68.8785	97.6707	0	0
13	97.729	68.9594	110.439	0	0
14	99.0634	69.0595	121.834	0	0
15	100.398	69.1789	131.672	0	0
16	101.732	69.3176	139.789	0	0
17	103.067	69.4758	146.033	0	0
18	104.401	69.6536	150.299	0	0
19	105.735	69.851	152.508	0	0
20	107.07	70.0682	152.575	0	0
21	108.404	70.3053	150.465	0	0
22	109.738	70.5625	146.183	0	0
23	111.073	70.8399	139.754	0	0
24	112.407	71.1378	131.237	0	0
25	113.742	71.4564	120.766	0	0
26	114.103	71.5461	117.625	0	0
27	115.45	71.8946	104.874	0	0
28	116.797	72.2648	90.7092	0	0
29	118.145	72.6567	75.0713	0	0
30	119.492	73.0708	57.933	0	0
31	120.84	73.5074	39.5768	0	0
32	122.187	73.9667	18.5654	0	0
33	123.534	74.4492	-6.54068	0	0
34	124.882	74.9552	-35.9612	0	0
35	126.229	75.4851	-69.9069	0	0
36	127.577	76.0394	-107.379	0	0
37	128.924	76.6186	270.02	0	0
38	130.271	77.2231	231.056	0	0
39	131.619	77.8535	187.514	0	0
40	132.966	78.5104	452.859	0	0
41	134.314	79.1945	399.93	0	0
42	135.661	79.9064	342.281	0	0
43	137.009	80.6468	281.454	0	0
44	138.356	81.4165	223.431	0	0
45	139.703	82.2164	168.696	0	0
46	141.051	83.0473	119.084	0	0
47	142.398	83.9104	75.6144	0	0
48	143.746	84.8066	39.3858	0	0
49	145.093	85.7371	11.5818	0	0
50	146.314	86.611	3.27394	0	0
51	147.535	87.5151	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.19227

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	81.7163	69.2517	0	0	0
2	83.0507	69.1218	0.280634	0	0
3	84.3851	69.0113	1.06951	0	0
4	85.7195	68.92	4.17383	0	0
5	87.0539	68.8479	9.76862	0	0
6	88.3883	68.7949	17.3917	0	0
7	89.7227	68.7611	27.3504	0	0
8	91.0571	68.7464	39.6087	0	0
9	92.3914	68.7507	53.6248	0	0
10	93.7258	68.7742	68.7735	0	0
11	95.0602	68.8168	83.6089	0	0
12	96.3946	68.8785	97.5111	0	0
13	97.729	68.9594	110.248	0	0
14	99.0634	69.0595	121.611	0	0
15	100.398	69.1789	131.415	0	0
16	101.732	69.3176	139.499	0	0
17	103.067	69.4758	145.708	0	0
18	104.401	69.6536	149.938	0	0
19	105.735	69.851	152.111	0	0
20	107.07	70.0682	152.141	0	0
21	108.404	70.3053	149.995	0	0
22	109.738	70.5625	145.677	0	0
23	111.073	70.8399	139.212	0	0
24	112.407	71.1378	130.658	0	0
25	113.742	71.4564	120.153	0	0
26	114.103	71.5461	117.003	0	0
27	115.45	71.8946	104.218	0	0
28	116.797	72.2648	90.0201	0	0
29	118.145	72.6567	74.3507	0	0
30	119.492	73.0708	57.1816	0	0
31	120.84	73.5074	38.7957	0	0
32	122.187	73.9667	17.7532	0	0
33	123.534	74.4492	-7.38687	0	0
34	124.882	74.9552	-36.8443	0	0
35	126.229	75.4851	-70.8298	0	0
36	127.577	76.0394	-108.343	0	0
37	128.924	76.6186	269.833	0	0
38	130.271	77.2231	230.831	0	0
39	131.619	77.8535	187.249	0	0
40	132.966	78.5104	453.404	0	0
41	134.314	79.1945	400.431	0	0
42	135.661	79.9064	342.735	0	0
43	137.009	80.6468	281.862	0	0
44	138.356	81.4165	223.796	0	0
45	139.703	82.2164	169.022	0	0
46	141.051	83.0473	119.374	0	0
47	142.398	83.9104	75.8749	0	0
48	143.746	84.8066	39.6221	0	0
49	145.093	85.7371	11.7999	0	0
50	146.314	86.611	3.47669	0	0
51	147.535	87.5151	0	0	0

Discharge Sections

Entity Information

◆ **Group 1**

Shared Entities

Type	Coordinates (x,y)
	299.743, 118.715
	299.434, 118.632
	299.318, 118.604
	298.062, 118.314
	297.675, 118.232
	297.52, 118.197
	296.935, 118.079
	296.782, 118.041
	296.048, 117.873
	295.255, 117.69
	294.422, 117.477
	293.908, 117.346
	292.794, 117.043
	292.575, 116.983
	291.627, 116.715
	291.336, 116.589
	290.597, 116.282
	287.545, 115.362
	286.608, 115.056
	286.429, 114.994
	285.62, 114.748
	285.37, 114.715
	284.063, 114.639
	282.748, 114.431
	281.339, 114.3
	280.832, 114.252
	280.052, 114.009
	279.855, 113.935
	278.786, 113.585
	278.197, 113.405
	277.61, 113.214
	276.563, 112.876
	276.412, 112.827
	276.127, 112.715
	274.901, 112.366
	273.813, 112.046
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	270.227, 110.969
	269.896, 110.94
	269.78, 110.903
	269.267, 110.715
	268.462, 110.469
	268.088, 110.339
	266.767, 109.907

266.526, 109.823
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263.331, 108.739
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263.257, 108.715
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256.929, 106.811
256.56, 106.715
255.701, 106.583
255.332, 106.522
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253.618, 106.255
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237.507, 103.701
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233.31, 103.093
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230.472, 102.715
229.606, 102.611
228.767, 102.518
227.843, 102.398
227.462, 102.328
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223.077, 101.744
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222.421, 101.608
221.849, 101.489
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198.912, 96.6862
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External Boundary

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300, 103.529

	300, 118.779
Material Boundary	0, 48.426 11.1667, 50.7219 23.5336, 52.8936 38.0098, 55.2376 47.5357, 58.7458 57.4759, 62.622 70.0072, 63.6175 81.6414, 64.2861 87.3676, 64.9497 96.6624, 66.9407 111.302, 70.8498 127.319, 74.8318 136.863, 78.1501 158.295, 80.9826 169.415, 81.4804 179.955, 82.8077 185.697, 84.2579 189.498, 85.9023 194.242, 90.0147 197.517, 96.5164
Material Boundary	0, 36.207 126.803, 62.8817 146.928, 65.3635 158.055, 69.0535 249.782, 84.9813 300, 103.529
	120.777, 77.8718 121.701, 78.1849 122.671, 78.5221 122.907, 78.5695 123.232, 78.7146 123.68, 78.9941 123.883, 79.1169 125.604, 80.1455 126.2, 80.5042 126.313, 80.5706 126.576, 80.7146 128.259, 81.5372 129.62, 82.2012 130.074, 82.4044 130.661, 82.7146 132.454, 83.3712 134.134, 84.0962 134.825, 84.3686 135.588, 84.7146 136.175, 84.9991 136.587, 85.1924 136.696, 85.2464 136.889, 85.4176 137.937, 85.5206 138.05, 85.5269 150, 85.8835 151.59, 85.931 152.516, 85.9609 152.575, 85.9637 152.594, 85.9698 153.924, 86.4729 154.145, 86.4827

Material Boundary	154.468, 86.4955
	154.772, 86.5061
	154.856, 86.5088
	155.681, 86.5316
	156.161, 86.5429
	157.363, 86.5644
	159.222, 86.6056
	160.01, 86.6211
	160.914, 86.6402
	162.254, 86.6711
	163.505, 86.6948
	163.931, 86.7007
	164.474, 86.7055
	165.682, 86.7022
	166.896, 86.7146
	166.951, 86.7146
	167.197, 86.7146
	167.279, 86.7146
	167.286, 86.7146
	168.021, 86.6998
	168.063, 86.6985
	168.244, 86.6898
	168.471, 86.7146
	168.548, 86.7146
	168.659, 86.7146
	168.802, 86.7146
	169.014, 86.7146
	169.476, 86.7146
	170.24, 86.7146
	171.206, 86.7146
171.237, 86.7146	
171.282, 86.7146	
171.284, 86.7146	
171.368, 86.7146	
171.83, 86.8479	

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 42.0706 125.65, 68.5027 145.774, 70.9845 156.902, 74.6745 248.628, 90.6023 300, 109.576	Assigned to:  AC  AC alt  R  FN
Distributed Load	150.7, 87.7298 137.85, 86.8583	Constant DistributionOrientation: Normal to boundaryMagnitude: 6 kN/m2Creates Excess Pore Pressure: No
Distributed Load	167.788, 88.4749 154.637, 87.5125	Constant DistributionOrientation: Normal to boundaryMagnitude: 6 kN/m2Creates Excess Pore Pressure: No



3+375

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

3+375

Project Summary

File Name:	3+375.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.456s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Right to Left

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	A2+M2+R2	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1.3	
Variable Actions: Favourable	1	
Effective cohesion	1.25	
Coefficient of shearing resistance	1.25	
Undrained strength	1.4	
Weight density	1	
Shear strength (other models)	1.25	
Earth resistance	1.1	
Tensile and plate strength	1.1	
Shear strength	1.1	
Compressive strength	1.1	
Bond strength	1.1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth [m]:	5
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Loading

2 Distributed Loads present





Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	20
Orientation:	Normal to boundary
Load Action:	Live

Distributed Load 2

Distribution:	Constant
Magnitude [kPa]:	20
Orientation:	Normal to boundary
Load Action:	Live

Materials


AC	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	23
Cohesion [kPa]	100
Friction Angle [deg]	27
Water Surface	Water Table
Hu Value	1
AC alt	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1
R	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	20
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1
FN	
Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	0
Friction Angle [deg]	20
Water Surface	Water Table
Hu Value	1

Support




pali

Color	
Type	Pile/Micro Pile
Force Application	Passive (Method B)
Force Orientation	Parallel to surface
Out-Of-Plane Spacing	0.5 m
Failure Mode	Shear
Pile Shear Strength	250 kN

Ancoraggio

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	1.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	50 kN/m
Material Dependent	Yes

Bond Strength Dependency

	Material	Bond Strength [kN/m]
	AC alt	80
	R	27
	FN	17

Global Minimums

Method: bishop simplified

FS	1.343720
Center:	91.724, 161.011
Radius:	92.224
Left Slip Surface Endpoint:	83.459, 69.158
Right Slip Surface Endpoint:	147.425, 87.508
Resisting Moment:	206092 kN-m
Driving Moment:	153375 kN-m
Passive Support Moment:	59930.1 kN-m
Maximum Single Support Force:	606.061 kN
Total Support Force:	1060.61 kN
Total Slice Area:	280.433 m ²
Surface Horizontal Width:	63.9654 m
Surface Average Height:	4.38414 m

Method: janbu simplified

FS	1.301840
Center:	121.158, 98.859
Radius:	24.544
Left Slip Surface Endpoint:	111.354, 76.358
Right Slip Surface Endpoint:	142.751, 87.191
Resisting Horizontal Force:	1640.08 kN
Driving Horizontal Force:	1259.82 kN
Passive Horizontal Support Force:	861.841 kN
Maximum Single Support Force:	606.061 kN
Total Support Force:	1060.61 kN
Total Slice Area:	144.783 m ²
Surface Horizontal Width:	31.3974 m
Surface Average Height:	4.61132 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 2						
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	18.0036	5.29908	12.7045	5.29908	12.7045	454.545
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	20.0212	5.1174	14.9038	5.1174	14.9038	606.061

Method: janbu simplified

Number of Supports: 2						
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	18.0036	6.3208	11.6828	6.3208	11.6828	454.545
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
128.704, 81.8253	20.0212	6.2259	13.7953	6.2259	13.7953	606.061

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	4915
Number of Invalid Surfaces:	97

Error Codes

Error Code -112 reported for 97 surfaces

Method: janbu simplified

Number of Valid Surfaces:	5011
Number of Invalid Surfaces:	1

Error Codes

Error Code -108 reported for 1 surface

Error Code Descriptions

The following errors were encountered during the computation:

- 108 = Total driving moment or total driving force < 0.1. This is to limit the calculation of extremely high safety factors if the driving force is very small (0.1 is an arbitrary number).
- 112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi))/F < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.34372

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	1.29455	3.13232	-4.73791	FN	0	16.2343	0.485402	0.652245	2.46404	0	2.46404	2.42381	2.42381
2	1.29455	13.2126	-3.93131	FN	0	16.2343	2.0411	2.74267	10.3612	0	10.3612	10.2209	10.2209
3	1.29455	23.9488	-3.1255	FN	0	16.2343	3.68816	4.95585	18.7221	0	18.7221	18.5207	18.5207
4	1.29455	34.6398	-2.3203	FN	0	16.2343	5.31809	7.14602	26.9961	0	26.9961	26.7806	26.7806
5	1.29455	48.9361	-1.51556	FN	0	16.2343	7.4898	10.0642	38.0204	0	38.0204	37.8223	37.8223
6	1.29455	64.6605	-0.711123	FN	0	16.2343	9.86619	13.2574	50.0835	0	50.0835	49.9611	49.9611
7	1.29455	80.2132	0.0931763	FN	0	16.2343	12.2019	16.396	61.9404	0	61.9404	61.9602	61.9602
8	1.29455	94.8973	0.897494	FN	0	16.2343	14.3917	19.3384	73.0564	0	73.0564	73.2819	73.2819
9	1.29455	102.874	1.70199	FN	0	16.2343	15.5541	20.9003	78.9565	0	78.9565	79.4186	79.4186
10	1.29455	108.643	2.50682	FN	0	16.2343	16.3766	22.0055	83.1317	0	83.1317	83.8486	83.8486
11	1.29455	113.952	3.31214	FN	0	16.2343	17.1248	23.011	86.9305	0	86.9305	87.9216	87.9216
12	1.29455	118.8	4.11812	FN	0	16.2343	17.7995	23.9175	90.3553	0	90.3553	91.6368	91.6368
13	1.29455	123.186	4.92492	FN	0	16.2343	18.4007	24.7254	93.4071	0	93.4071	94.9926	94.9926
14	1.29455	127.108	5.7327	FN	0	16.2343	18.9291	25.4354	96.089	0	96.089	97.9893	97.9893
15	1.29455	130.348	6.54163	FN	0	16.2343	19.3526	26.0045	98.2394	0	98.2394	100.459	100.459
16	1.29455	132.999	7.35186	FN	0	16.2343	19.6863	26.4529	99.9335	0	99.9335	102.473	102.473
17	1.29455	135.954	8.16358	FN	0	16.2343	20.0624	26.9583	101.843	0	101.843	104.721	104.721
18	1.29455	137.693	8.97695	FN	0	16.2343	20.2571	27.2199	102.831	0	102.831	106.031	106.031
19	1.29455	138.689	9.79215	FN	0	16.2343	20.3411	27.3327	103.257	0	103.257	106.767	106.767
20	1.29455	138.938	10.6094	FN	0	16.2343	20.3149	27.2976	103.124	0	103.124	106.929	106.929
21	1.29455	138.501	11.4288	FN	0	16.2343	20.1884	27.1275	102.482	0	102.482	106.563	106.563
22	1.29455	137.687	12.2505	FN	0	16.2343	20.0074	26.8843	101.563	0	101.563	105.907	105.907
23	1.29455	135.686	13.0749	FN	0	16.2343	19.6549	26.4107	99.7741	0	99.7741	104.339	104.339
24	1.47983	150.969	13.9614	FN	0	16.2343	19.066	25.6193	96.7842	0	96.7842	101.524	101.524
25	1.26209	123.658	14.8407	FN	0	16.2343	18.2495	24.5222	92.6393	0	92.6393	97.4748	97.4748
26	1.26209	118.576	15.6534	FN	0	16.2343	17.4449	23.441	88.5548	0	88.5548	93.443	93.443
27	1.26209	115.996	16.4694	FN	0	16.2343	17.0115	22.8587	86.3551	0	86.3551	91.3843	91.3843
28	1.26209	112.561	17.2888	FN	0	16.2343	16.4553	22.1113	83.5315	0	83.5315	88.6533	88.6533
29	1.26209	109.397	18.1119	FN	0	16.2343	15.9413	21.4206	80.9226	0	80.9226	86.1367	86.1367
30	1.26209	115.276	18.9389	FN	0	16.2343	16.7434	22.4985	84.9943	0	84.9943	90.7396	90.7396
31	1.26209	125.337	19.77	FN	0	16.2343	18.1449	24.3816	92.1082	0	92.1082	98.63	98.63
32	1.26209	134.733	20.6054	FN	0	16.2343	19.4402	26.1222	98.6836	0	98.6836	105.993	105.993
33	1.26209	143.566	21.4455	FN	0	16.2343	20.6448	27.7408	104.799	0	104.799	112.908	112.908
34	1.26209	149.236	22.2904	FN	0	16.2343	21.3868	28.7379	108.565	0	108.565	117.332	117.332
35	1.26209	138.495	23.1405	FN	0	16.2343	19.7786	26.5769	100.402	0	100.402	108.854	108.854
36	1.26209	133.458	23.996	FN	0	16.2343	0	0	-3.65926	0	-3.65926	-3.65926	-3.65926
37	1.26209	140.142	24.8572	FN	0	16.2343	19.8718	26.7022	100.875	0	100.875	110.081	110.081
38	1.26209	146.396	25.7245	FN	0	16.2343	65.9773	88.655	334.919	0	334.919	366.707	366.707
39	1.26209	152.071	26.5981	FN	0	16.2343	21.4051	28.7624	108.658	0	108.658	119.376	119.376
40	1.26209	157.128	27.4785	FN	0	16.2343	22.0332	29.6065	111.847	0	111.847	123.306	123.306
41	1.26209	161.569	28.3659	FN	0	16.2343	22.5685	30.3257	114.563	0	114.563	126.749	126.749
42	1.26209	155.543	29.2608	FN	0	16.2343	21.6409	29.0793	109.855	0	109.855	121.98	121.98
43	1.26209	138.656	30.1637	FN	0	16.2343	22.2531	29.9019	112.962	0	112.962	125.895	125.895
44	1.26209	122.318	31.0749	FN	0	16.2343	21.408	28.7664	108.673	0	108.673	121.575	121.575
45	1.26209	105.393	31.9949	FN	0	16.2343	18.9917	25.5195	96.4071	0	96.4071	108.272	108.272
46	1.26209	87.7709	32.9242	FN	0	16.2343	16.4982	22.1689	83.7494	0	83.7494	94.4324	94.4324
47	1.26209	69.4296	33.8635	FN	0	16.2343	13.9263	18.713	70.6939	0	70.6939	80.0391	80.0391
48	1.26209	50.3454	34.8131	FN	0	16.2343	11.2749	15.1503	57.2345	0	57.2345	65.0746	65.0746
49	1.21037	29.3958	35.7539	R	0	29.2561	14.6455	19.6794	38.6444	0	38.6444	49.1892	49.1892
50	1.21037	9.92067	36.6861	R	0	29.2561	9.87989	13.2758	26.0698	0	26.0698	33.4304	33.4304

Global Minimum Query (janbu simplified) - Safety Factor: 1.30184

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	0.622132	2.21555	-22.7557	FN	0	16.2343	0.799054	1.04024	3.9298	0	3.9298	3.59464	3.59464
2	0.622132	6.4328	-21.1894	FN	0	16.2343	2.30198	2.99681	11.3213	0	11.3213	10.4289	10.4289
3	0.622132	10.458	-19.6396	FN	0	16.2343	3.7144	4.83556	18.2677	0	18.2677	16.9422	16.9422
4	0.622132	14.0849	-18.1046	FN	0	16.2343	4.96645	6.46552	24.4253	0	24.4253	22.8016	22.8016
5	0.622132	17.3515	-16.5829	FN	0	16.2343	6.07555	7.9094	29.88	0	29.88	28.0707	28.0707
6	0.622132	20.3128	-15.0732	FN	0	16.2343	7.06426	9.19653	34.7425	0	34.7425	32.84	32.84
7	0.622132	22.9625	-13.5742	FN	0	16.2343	7.93316	10.3277	39.0158	0	39.0158	37.1004	37.1004
8	0.622132	25.3463	-12.0845	FN	0	16.2343	8.70045	11.3266	42.7895	0	42.7895	40.9268	40.9268
9	0.622132	27.8342	-10.6031	FN	0	16.2343	9.49448	12.3603	46.6945	0	46.6945	44.9172	44.9172
10	0.622132	30.4881	-9.12885	FN	0	16.2343	10.3358	13.4556	50.8323	0	50.8323	49.1715	49.1715
11	0.622132	33.3994	-7.66067	FN	0	16.2343	11.2545	14.6515	55.35	0	55.35	53.8362	53.8362
12	0.622132	36.0532	-6.19754	FN	0	16.2343	12.0765	15.7217	59.3932	0	59.3932	58.0818	58.0818
13	0.622132	37.9369	-4.73845	FN	0	16.2343	12.6331	16.4463	62.1305	0	62.1305	61.0833	61.0833
14	0.622132	39.902	-3.28244	FN	0	16.2343	13.2106	17.1981	64.9708	0	64.9708	64.2131	64.2131
15	0.622132	41.9807	-1.82855	FN	0	16.2343	13.8192	17.9904	67.964	0	67.964	67.5228	67.5228
16	0.622132	44.9537	-0.375844	FN	0	16.2343	14.7138	19.155	72.3637	0	72.3637	72.2671	72.2671
17	0.622132	49.978	1.07662	FN	0	16.2343	16.266	21.1757	79.9972	0	79.9972	80.3029	80.3029
18	0.622132	54.8366	2.52979	FN	0	16.2343	17.747	23.1037	87.2809	0	87.2809	88.065	88.065
19	0.622132	59.5079	3.98458	FN	0	16.2343	19.1507	24.9312	94.1847	0	94.1847	95.5187	95.5187
20	0.622132	63.9555	5.44195	FN	0	16.2343	20.4666	26.6443	100.656	0	100.656	102.606	102.606
21	0.622132	68.1847	6.90287	FN	0	16.2343	21.6975	28.2467	106.71	0	106.71	109.337	109.337
22	0.622132	72.2203	8.36831	FN	0	16.2343	22.8522	29.7499	112.388	0	112.388	115.75	115.75
23	0.622132	76.0582	9.83929	FN	0	16.2343	23.9301	31.1532	117.69	0	117.69	121.84	121.84
24	0.622132	79.6956	11.3169	FN	0	16.2343	24.9313	32.4566	122.614	0	122.614	127.603	127.603
25	0.622132	82.8608	12.8021	FN	0	16.2343	25.772	33.551	126.749	0	126.749	132.605	132.605
26	0.622132	82.1159	14.2961	FN	0	16.2343	25.3912	33.0553	124.876	0	124.876	131.346	131.346
27	0.622132	79.9917	15.8002	FN	0	16.2343	24.588	32.0096	120.926	0	120.926	127.883	127.883
28	0.622132	77.6852	17.3155	FN	0	16.2343	0	0	-42.1223	0	-42.1223	-42.1223	-42.1223
29	0.622132	78.2541	18.8434	FN	0	16.2343	23.7626	30.9351	116.866	0	116.866	124.975	124.975
30	0.622132	80.6343	20.3854	FN	0	16.2343	24.332	31.6764	119.666	0	119.666	128.708	128.708
31	0.622132	82.7813	21.943	FN	0	16.2343	24.8197	32.3113	122.065	0	122.065	132.064	132.064
32	0.622132	84.6944	23.5178	FN	0	16.2343	25.2261	32.8403	124.063	0	124.063	135.041	135.041
33	0.622132	86.3758	25.1117	FN	0	16.2343	25.5524	33.2652	125.669	0	125.669	137.645	137.645
34	0.622132	87.7992	26.7267	FN	0	16.2343	25.7916	33.5766	126.845	0	126.845	139.832	139.832
35	0.622132	88.9466	28.365	FN	0	16.2343	122.057	158.899	600.286	0	600.286	666.185	666.185
36	0.622132	89.8076	30.029	FN	0	16.2343	25.9924	33.838	127.833	0	127.833	142.857	142.857
37	0.622132	90.3739	31.7214	FN	0	16.2343	25.9503	33.7831	127.625	0	127.625	143.666	143.666
38	0.622132	90.6337	33.4454	FN	0	16.2343	25.8099	33.6004	126.935	0	126.935	143.983	143.983
39	0.622132	90.5571	35.2044	FN	0	16.2343	25.5639	33.2801	125.725	0	125.725	143.761	143.761
40	0.622132	90.113	37.0024	FN	0	16.2343	25.2045	32.8122	123.957	0	123.957	142.952	142.952
41	0.622132	86.4896	38.8441	FN	0	16.2343	23.9542	31.1845	117.808	0	117.808	137.098	137.098
42	0.622132	80.2748	40.7348	FN	0	16.2343	21.9999	28.6404	108.197	0	108.197	127.143	127.143
43	0.622132	73.7121	42.6809	FN	0	16.2343	21.7726	28.3444	107.079	0	107.079	127.156	127.156
44	0.622132	66.9497	44.6902	FN	0	16.2343	22.2469	28.9619	109.412	0	109.412	131.419	131.419
45	0.622132	59.7211	46.772	FN	0	16.2343	20.0386	26.087	98.5511	0	98.5511	119.869	119.869
46	0.622132	51.894	48.9377	FN	0	16.2343	17.7034	23.047	87.0667	0	87.0667	107.387	107.387
47	0.622132	43.3876	51.2022	FN	0	16.2343	15.2309	19.8282	74.9068	0	74.9068	93.8517	93.8517
48	0.622132	34.0973	53.5845	FN	0	16.2343	12.6088	16.4146	62.0108	0	62.0108	79.1032	79.1032
49	0.622132	23.8828	56.1102	FN	0	16.2343	9.82248	12.7873	48.3078	0	48.3078	62.9308	62.9308
50	0.912941	13.5917	59.5134	R	0	29.2561	9.24161	12.0311	23.6255	0	23.6255	39.323	39.323

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.34372

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	83.4595	69.1577	0	0	0
2	84.754	69.0504	0.895078	0	0
3	86.0486	68.9614	4.46894	0	0
4	87.3431	68.8907	10.5845	0	0
5	88.6377	68.8383	18.9106	0	0
6	89.9322	68.804	29.9446	0	0
7	91.2268	68.788	43.5689	0	0
8	92.5213	68.7901	59.2929	0	0
9	93.8159	68.8104	76.5111	0	0
10	95.1104	68.8488	93.6839	0	0
11	96.405	68.9055	110.251	0	0
12	97.6995	68.9804	125.989	0	0
13	98.9941	69.0736	140.695	0	0
14	100.289	69.1852	154.184	0	0
15	101.583	69.3151	166.292	0	0
16	102.878	69.4636	176.854	0	0
17	104.172	69.6306	185.742	0	0
18	105.467	69.8163	192.897	0	0
19	106.761	70.0208	198.189	0	0
20	108.056	70.2442	201.548	0	0
21	109.35	70.4867	202.938	0	0
22	110.645	70.7484	202.35	0	0
23	111.94	71.0295	199.798	0	0
24	113.234	71.3302	195.34	0	0
25	114.714	71.6981	188.051	0	0
26	115.976	72.0325	180.189	0	0
27	117.238	72.3861	170.97	0	0
28	118.5	72.7593	160.299	0	0
29	119.762	73.1521	148.33	0	0
30	121.024	73.5649	135.119	0	0
31	122.286	73.998	119.521	0	0
32	123.549	74.4516	100.722	0	0
33	124.811	74.9261	78.5205	0	0
34	126.073	75.4219	52.7171	0	0
35	127.335	75.9393	23.6401	0	0
36	128.597	76.4786	-5.45998	0	0
37	129.859	77.0404	305.635	0	0
38	131.121	77.6251	271.826	0	0
39	132.383	78.2332	470.192	0	0
40	133.645	78.8652	428.64	0	0
41	134.907	79.5216	383.135	0	0
42	136.169	80.203	333.655	0	0
43	137.432	80.9101	283.388	0	0
44	138.694	81.6436	230.209	0	0
45	139.956	82.4042	176.898	0	0
46	141.218	83.1927	127.166	0	0
47	142.48	84.0099	81.847	0	0
48	143.742	84.8568	41.8417	0	0
49	145.004	85.7345	8.12051	0	0
50	146.214	86.6059	-5.63062	0	0
51	147.425	87.5076	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.30184

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	111.354	76.3579	0	0	0
2	111.976	76.097	1.52248	0	0
3	112.598	75.8558	5.68463	0	0
4	113.22	75.6338	12.0505	0	0
5	113.842	75.4304	20.1075	0	0
6	114.464	75.2451	29.4219	0	0
7	115.087	75.0776	39.6368	0	0
8	115.709	74.9273	50.4315	0	0
9	116.331	74.7941	61.5422	0	0
10	116.953	74.6777	72.8856	0	0
11	117.575	74.5777	84.3958	0	0
12	118.197	74.494	96.0273	0	0
13	118.819	74.4265	107.551	0	0
14	119.441	74.3749	118.612	0	0
15	120.064	74.3392	129.147	0	0
16	120.686	74.3194	139.091	0	0
17	121.308	74.3153	148.538	0	0
18	121.93	74.327	157.72	0	0
19	122.552	74.3545	166.358	0	0
20	123.174	74.3978	174.188	0	0
21	123.796	74.4571	180.951	0	0
22	124.419	74.5324	186.409	0	0
23	125.041	74.6239	190.336	0	0
24	125.663	74.7318	192.521	0	0
25	126.285	74.8563	192.761	0	0
26	126.907	74.9977	190.872	0	0
27	127.529	75.1562	186.867	0	0
28	128.151	75.3322	180.871	0	0
29	128.773	75.5262	522.374	0	0
30	129.396	75.7385	512.341	0	0
31	130.018	75.9697	499.809	0	0
32	130.64	76.2203	484.651	0	0
33	131.262	76.4911	466.752	0	0
34	131.884	76.7827	446.002	0	0
35	132.506	77.0959	422.307	0	0
36	133.128	77.4318	625.274	0	0
37	133.751	77.7914	595.471	0	0
38	134.373	78.176	562.531	0	0
39	134.995	78.5869	526.423	0	0
40	135.617	79.0259	487.137	0	0
41	136.239	79.4947	444.696	0	0
42	136.861	79.9957	400.573	0	0
43	137.483	80.5315	356.286	0	0
44	138.105	81.1052	308.847	0	0
45	138.728	81.7206	256.444	0	0
46	139.35	82.3825	204.777	0	0
47	139.972	83.0966	154.71	0	0
48	140.594	83.8704	107.314	0	0
49	141.216	84.7138	63.9557	0	0
50	141.838	85.64	26.4199	0	0
51	142.751	87.1907	0	0	0

Discharge Sections

Entity Information

◆ **Group 1**

Shared Entities

Type	Coordinates (x,y)
	299.743, 118.715
	299.434, 118.632
	299.318, 118.604
	298.062, 118.314
	297.675, 118.232
	297.52, 118.197
	296.935, 118.079
	296.782, 118.041
	296.048, 117.873
	295.255, 117.69
	294.422, 117.477
	293.908, 117.346
	292.794, 117.043
	292.575, 116.983
	291.627, 116.715
	291.336, 116.589
	290.597, 116.282
	287.545, 115.362
	286.608, 115.056
	286.429, 114.994
	285.62, 114.748
	285.37, 114.715
	284.063, 114.639
	282.748, 114.431
	281.339, 114.3
	280.832, 114.252
	280.052, 114.009
	279.855, 113.935
	278.786, 113.585
	278.197, 113.405
	277.61, 113.214
	276.563, 112.876
	276.412, 112.827
	276.127, 112.715
	274.901, 112.366
	273.813, 112.046
	271.647, 111.338
	270.227, 110.969
	269.896, 110.94
	269.78, 110.903
	269.267, 110.715
	268.462, 110.469
	268.088, 110.339
	266.767, 109.907

266.526, 109.823
265.569, 109.494
264.896, 109.262
263.359, 108.748
263.331, 108.739
263.315, 108.734
263.257, 108.715
261.886, 108.284
261.411, 108.13
260.26, 107.788
259.548, 107.589
258.633, 107.293
258.253, 107.182
257.007, 106.836
256.929, 106.811
256.56, 106.715
255.701, 106.583
255.332, 106.522
253.976, 106.318
253.618, 106.255
251.863, 105.973
251.713, 105.944
250.817, 105.779
249.771, 105.61
248.874, 105.45
248.349, 105.36
247.617, 105.23
246.399, 105.05
245.341, 104.873
244.453, 104.715
244.093, 104.647
244.068, 104.644
244.056, 104.642
242.883, 104.411
241.938, 104.239
241.238, 104.128
240.717, 104.08
240.503, 104.058
238.874, 103.851
238.393, 103.806
238.141, 103.779
237.969, 103.76
237.507, 103.701
236.842, 103.607
236.735, 103.591
236.263, 103.52
235.316, 103.383
234.233, 103.232
233.584, 103.131
233.365, 103.1
233.31, 103.093
230.929, 102.778
230.887, 102.772
230.472, 102.715
229.606, 102.611
228.767, 102.518
227.843, 102.398
227.462, 102.328
223.562, 101.849

223.077, 101.744
222.846, 101.692
222.421, 101.608
221.849, 101.489
221.219, 101.386
220.31, 101.219
218.047, 100.715
217.932, 100.715
217.903, 100.715
217.734, 100.715
217.706, 100.715
216.366, 100.397
209.328, 98.7146
207.652, 98.2992
206.991, 98.1491
203.309, 97.3306
203.006, 97.2559
203.001, 97.2561
202.983, 97.2509
199.959, 96.8396
199.12, 96.7146
198.912, 96.6862
198.331, 96.6118
198.079, 96.571
197.517, 96.5164
196.672, 95.8374
196.525, 95.7205
196.214, 95.4928
195.23, 94.7373
195.208, 94.72
195.2, 94.7146
194.687, 94.5078
190.209, 92.7146
189.448, 92.4519
187.494, 91.7808
185, 90.9495
184.295, 90.7146
180.913, 89.5884
178.354, 88.7146
176.679, 88.2488
171.83, 86.8479
169.438, 88.4426
167.788, 88.4749
154.637, 87.5125
150.7, 87.7298
137.85, 86.8583
136.2, 86.8253
128.704, 81.8253
126.704, 81.8253
120.777, 77.8718
120.671, 77.836
120.093, 77.7459
119.61, 77.5996
118.37, 77.4141
117.824, 77.2716
117.111, 77.1029
116.227, 76.966
116.03, 76.951
115.517, 76.9068

External Boundary

114.743, 76.8337
113.863, 76.7357
113.855, 76.735
113.687, 76.7146
112.8, 76.5936
112.711, 76.5774
112.595, 76.5543
111.429, 76.3738
111.131, 76.3107
110.603, 76.223
110.123, 76.1235
108.626, 75.8562
107.908, 75.7247
106.095, 75.3688
105.313, 75.2185
105, 75.1518
103.085, 74.7146
102.21, 74.5504
101.951, 74.5019
93.5712, 72.7146
93.4703, 72.7146
93.4615, 72.7146
93.458, 72.7146
90.8152, 71.4666
89.1978, 70.7146
88.1213, 70.2552
84.2636, 69.2257
83.9466, 69.1749
83.711, 69.1996
83.2395, 69.1211
83.0917, 69.1448
83.0403, 69.1531
82.9118, 69.18
82.7877, 69.1733
82.4315, 69.2528
81.977, 69.2466
81.4483, 69.257
81.1461, 69.3185
81.0225, 69.3343
80.8549, 69.3585
80.4061, 69.441
80.2537, 69.4518
79.7198, 69.5697
79.405, 69.5795
79.2096, 69.6236
78.6699, 69.7154
78.5427, 69.7294
78.1817, 69.7278
77.8198, 69.7555
77.7654, 69.7582
77.4787, 69.7598
77.1107, 69.7485
76.7485, 69.7438
76.3739, 69.7262
75.7148, 69.6676
75.5901, 69.6513
75.0111, 69.6017
74.6888, 69.5791
74.1203, 69.5318





73.9787, 69.5155
73.6463, 69.4676
73.0113, 69.4543
72.8266, 69.4576
72.1797, 69.3545
71.4203, 69.389
71.3045, 69.3745
70.7172, 69.3842
70.3246, 69.3275
69.8312, 69.3296
69.1985, 69.3251
68.9006, 69.2906
68.7873, 69.2752
67.845, 69.3017
67.6522, 69.2761
67.2178, 69.2762
66.8434, 69.2681
66.1158, 69.2239
65.5571, 69.1756
65.299, 69.1397
63.8343, 69.0053
63.8022, 69.0006
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61.5091, 68.7146
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59.8244, 68.283
59.1553, 68.0874
57.6988, 67.6696
56.2774, 67.2384
55.819, 67.0976
54.5753, 66.7146
52.0421, 65.921
49.6135, 65.2215
49.5164, 65.1932
49.0746, 65.0656
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47.9184, 64.7146
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44.7657, 63.4693
43.9088, 63.138
42.7353, 62.7146
42.0849, 62.4637
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39.6689, 61.5017
39.0292, 61.2592
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37.0859, 60.5205
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33.4456, 59.5792
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30.7813, 58.849
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29.2797, 58.4286

28.1221, 58.1524
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26.0461, 57.6956
25.4037, 57.5457
25.162, 57.5028
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24.6846, 57.4255
24.2397, 57.3876
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23.3032, 57.2293
23.1531, 57.2209
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18.2744, 56.4361
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17.571, 56.3448
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14.1665, 55.6394
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11.3296, 54.7146
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8.12107, 54.0161
4.94876, 53.2626
4.79071, 53.2254
4.66431, 53.1963
4.62375, 53.1883
4.5897, 53.1842
4.57814, 53.1831
4.56121, 53.1826
4.55066, 53.1821
2.00779, 52.8463
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1.23868, 52.7152
1.23435, 52.7146
1.23353, 52.7146
0.769293, 52.6527
0.731015, 52.6435
0.247451, 52.5552
0.176125, 52.5397
0, 52.5043
0, 48.426
0, 36.207
0, 0
300, 0
300, 103.529

	300, 118.779
Material Boundary	0, 48.426 11.1667, 50.7219 23.5336, 52.8936 38.0098, 55.2376 47.5357, 58.7458 57.4759, 62.622 70.0072, 63.6175 81.6414, 64.2861 87.3676, 64.9497 96.6624, 66.9407 111.302, 70.8498 127.319, 74.8318 136.863, 78.1501 158.295, 80.9826 169.415, 81.4804 179.955, 82.8077 185.697, 84.2579 189.498, 85.9023 194.242, 90.0147 197.517, 96.5164
Material Boundary	0, 36.207 126.803, 62.8817 146.928, 65.3635 158.055, 69.0535 249.782, 84.9813 300, 103.529
	120.777, 77.8718 121.701, 78.1849 122.671, 78.5221 122.907, 78.5695 123.232, 78.7146 123.68, 78.9941 123.883, 79.1169 125.604, 80.1455 126.2, 80.5042 126.313, 80.5706 126.576, 80.7146 128.259, 81.5372 129.62, 82.2012 130.074, 82.4044 130.661, 82.7146 132.454, 83.3712 134.134, 84.0962 134.825, 84.3686 135.588, 84.7146 136.175, 84.9991 136.587, 85.1924 136.696, 85.2464 136.889, 85.4176 137.937, 85.5206 138.05, 85.5269 150, 85.8835 151.59, 85.931 152.516, 85.9609 152.575, 85.9637 152.594, 85.9698 153.924, 86.4729 154.145, 86.4827

Material Boundary	154.468, 86.4955
	154.772, 86.5061
	154.856, 86.5088
	155.681, 86.5316
	156.161, 86.5429
	157.363, 86.5644
	159.222, 86.6056
	160.01, 86.6211
	160.914, 86.6402
	162.254, 86.6711
	163.505, 86.6948
	163.931, 86.7007
	164.474, 86.7055
	165.682, 86.7022
	166.896, 86.7146
	166.951, 86.7146
	167.197, 86.7146
	167.279, 86.7146
	167.286, 86.7146
	168.021, 86.6998
	168.063, 86.6985
	168.244, 86.6898
	168.471, 86.7146
	168.548, 86.7146
	168.659, 86.7146
	168.802, 86.7146
	169.014, 86.7146
	169.476, 86.7146
	170.24, 86.7146
	171.206, 86.7146
171.237, 86.7146	
171.282, 86.7146	
171.284, 86.7146	
171.368, 86.7146	
171.83, 86.8479	

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 42.0706	Assigned to:  AC  AC alt  R  FN
	125.65, 68.5027	
	145.774, 70.9845	
	156.902, 74.6745	
	248.628, 90.6023	
	300, 109.576	
Distributed Load	150.7, 87.7298	Constant DistributionOrientation: Normal to boundaryMagnitude: 20 kN/m2Creates Excess Pore Pressure: No
	137.85, 86.8583	
Distributed Load	167.788, 88.4749 154.637, 87.5125	Constant DistributionOrientation: Normal to boundaryMagnitude: 20 kN/m2Creates Excess Pore Pressure: No



3+862 - sisma

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

3+862 - sisma

Project Summary

File Name:	3+862 - sisma.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.536s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Left to Right

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	M1+R2 fronti scavo sisma	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1	
Variable Actions: Favourable	1	
Effective cohesion	1	
Coefficient of shearing resistance	1	
Undrained strength	1	
Weight density	1	
Shear strength (other models)	1	
Earth resistance	1.2	
Tensile and plate strength	1	
Shear strength	1	
Compressive strength	1	
Bond strength	1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth [m]:	5
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.091
Seismic Load Coefficient (Vertical):	0.045

Loading

1 Distributed Load present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	6
Orientation:	Normal to boundary
Load Action:	Live

Materials

AC

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	23
Cohesion [kPa]	100
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

AC alt

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

R

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1

FN


Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	0
Friction Angle [deg]	25
Water Surface	Water Table
Hu Value	1

Support




pali

Color	
Type	Pile/Micro Pile
Force Application	Passive (Method B)
Force Orientation	Parallel to surface
Out-Of-Plane Spacing	0.5 m
Failure Mode	Shear
Pile Shear Strength	260 kN

Ancoraggio

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	1.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	50 kN/m
Material Dependent	Yes

Bond Strength Dependency

	Material	Bond Strength [kN/m]
	AC alt	80
	R	27
	FN	17

Global Minimums

Method: bishop simplified

	FS	1.024410
Center:		168.583, 210.426
Radius:		136.896
Left Slip Surface Endpoint:		75.362, 110.175
Right Slip Surface Endpoint:		160.530, 73.767
Resisting Moment:		482698 kN-m
Driving Moment:		471196 kN-m
Passive Support Moment:		77921.2 kN-m
Maximum Single Support Force:		635.632 kN
Total Support Force:		1155.63 kN
Total Slice Area:		347.716 m ²
Surface Horizontal Width:		85.1685 m
Surface Average Height:		4.08268 m

Method: janbu simplified

	FS	0.988403
Center:		132.367, 147.079
Radius:		79.340
Left Slip Surface Endpoint:		62.361, 109.740
Right Slip Surface Endpoint:		162.468, 73.670
Resisting Horizontal Force:		12209.6 kN
Driving Horizontal Force:		12352.8 kN
Passive Horizontal Support Force:		313.291 kN
Maximum Single Support Force:		441.097 kN
Total Support Force:		441.097 kN
Total Slice Area:		1565.6 m ²
Surface Horizontal Width:		100.106 m
Surface Average Height:		15.6394 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	25.0163	1.91959	23.0967	1.91959	23.0967	635.632
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	20	2.51007	17.4899	2.51007	17.4899	520

Method: janbu simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	25.0163	14.573	10.4433	14.573	10.4433	441.097
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	20	Not Effective	Not Effective	Not Effective	Not Effective	0

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	5968
Number of Invalid Surfaces:	2

Error Codes

Error Code -112 reported for 2 surfaces

Method: janbu simplified

Number of Valid Surfaces:	5932
Number of Invalid Surfaces:	38

Error Codes

Error Code -112 reported for 38 surfaces

Error Code Descriptions

The following errors were encountered during the computation:

-112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi))/F < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.02441

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	1.82758	30.0347	-42.401	R	0	35	6.01569	6.16253	10.5612	0	10.5612	16.0544	16.0544
2	1.82758	68.5222	-41.3734	R	0	35	13.9143	14.2539	24.4281	0	24.4281	36.6836	36.6836
3	1.82758	83.8564	-40.3618	R	0	35	38.6001	39.5423	67.7668	0	67.7668	100.574	100.574
4	1.82758	120.588	-39.3652	R	0	35	25.1359	25.7495	44.1288	0	44.1288	64.7501	64.7501
5	1.82758	156.189	-38.3826	R	0	35	32.966	33.7707	57.8753	0	57.8753	83.9875	83.9875
6	1.82758	168.424	-37.4131	R	0	35	35.983	36.8613	63.1721	0	63.1721	90.6962	90.6962
7	1.82758	175.426	-36.4561	R	0	35	37.9249	38.8506	66.5815	0	66.5815	94.5995	94.5995
8	1.82758	180.04	-35.5108	R	0	35	39.374	40.3351	69.1255	0	69.1255	97.2218	97.2218
9	1.78457	178.708	-34.5873	FN	4	25	32.6651	33.4624	77.5345	0	77.5345	100.058	100.058
10	1.78457	180.49	-33.6848	FN	4	25	33.2315	34.0426	79.0276	0	79.0276	101.178	101.178
11	1.78457	184.461	-32.7918	FN	4	25	34.1742	35.0084	81.5132	0	81.5132	103.53	103.53
12	1.78457	188.038	-31.9076	FN	4	25	35.0556	35.9113	83.8365	0	83.8365	105.663	105.663
13	1.78457	191.254	-31.0318	FN	4	25	35.8799	36.7557	86.0093	0	86.0093	107.595	107.595
14	1.78457	197.005	-30.1641	FN	4	25	37.1542	38.0611	89.3688	0	89.3688	110.962	110.962
15	1.78457	206.267	-29.3038	FN	4	25	39.0607	40.0141	94.3947	0	94.3947	116.318	116.318
16	1.78457	213.665	-28.4508	FN	4	25	40.6558	41.6482	98.5995	0	98.5995	120.629	120.629
17	1.78457	208.882	-27.6046	FN	4	25	40.0821	41.0605	97.0876	0	97.0876	118.046	118.046
18	1.78457	200.593	-26.7649	FN	4	25	38.8611	39.8097	93.8686	0	93.8686	113.469	113.469
19	1.51438	172.745	-25.9941	FN	4	25	39.3574	40.3181	96.1019	0.924938	95.177	115.293	114.368
20	1.51438	174.83	-25.291	FN	4	25	39.4871	40.451	98.1826	2.66332	95.5193	116.841	114.177
21	1.71352	199.088	-24.5463	AC alt	50	30	76.0574	77.914	79.6024	4.26364	75.3387	114.338	110.074
22	1.59864	185.315	-23.7865	FN	4	25	39.1734	40.1296	100.352	5.66036	94.6919	117.619	111.958
23	1.59864	184.06	-23.0573	FN	4	25	38.7897	39.7365	100.441	6.76085	93.68	116.952	110.191
24	1.59864	182.62	-22.332	FN	4	25	38.4344	39.3726	100.37	7.62619	92.7437	116.158	108.532
25	1.59864	185.854	-21.6105	FN	4	25	39.1275	40.0826	102.831	8.2601	94.571	118.331	110.071
26	1.59864	189.719	-20.8925	FN	4	25	40.7785	41.7739	105.278	6.35486	98.9235	120.844	114.489
27	1.59864	192.529	-20.178	FN	4	25	42.3773	43.4117	107.106	3.96768	103.138	122.679	118.712
28	1.59864	187.443	-19.4668	FN	4	25	42.3771	43.4115	104.496	1.359	103.137	119.475	118.116
29	1.67133	187.469	-18.7426	FN	4	25	41.3158	42.3243	100.34	0	100.34	114.359	114.359
30	1.67133	181.707	-18.0055	FN	4	25	40.3605	41.3457	97.8212	0	97.8212	110.939	110.939
31	1.67133	171.248	-17.2714	FN	4	25	38.4159	39.3536	92.6951	0	92.6951	104.639	104.639
32	1.67133	158.563	-16.5403	FN	4	25	35.9819	36.8602	86.278	0	86.278	96.9639	96.9639
33	1.67133	144.493	-15.8119	FN	4	25	33.2274	34.0385	79.0173	0	79.0173	88.4272	88.4272
34	1.67133	128.799	-15.0862	FN	4	25	30.0975	30.8321	70.7658	0	70.7658	78.8789	78.8789
35	1.67133	112.462	-14.3629	FN	4	25	26.7943	27.4483	62.0574	0	62.0574	68.9185	68.9185
36	1.67133	97.0019	-13.6419	FN	4	25	23.6406	24.2176	53.7438	0	53.7438	59.4813	59.4813
37	1.67133	92.4438	-12.9232	FN	4	25	22.7914	23.3477	51.5052	0	51.5052	56.7348	56.7348
38	1.67133	94.669	-12.2065	FN	4	25	23.3961	23.9672	53.0993	0	53.0993	58.1605	58.1605
39	1.67133	95.7889	-11.4917	FN	4	25	23.7665	24.3466	54.0758	0	54.0758	58.9075	58.9075
40	1.67133	90.9555	-10.7788	FN	4	25	22.8408	23.3983	51.6355	0	51.6355	55.9839	55.9839
41	1.67133	83.0775	-10.0675	FN	4	25	21.2363	21.7546	47.4056	0	47.4056	51.1759	51.1759
42	1.67133	74.3281	-9.35778	FN	4	25	19.4214	19.8954	42.621	0	42.621	45.8215	45.8215
43	1.67133	63.1928	-8.64952	FN	4	25	17.057	17.4733	36.3879	0	36.3879	38.9826	38.9826
44	1.67133	50.9421	-7.94259	FN	4	25	14.4176	14.7695	29.4301	0	29.4301	31.4417	31.4417
45	1.67133	41.3353	-7.23688	FN	4	25	12.342	12.6433	23.9583	0	23.9583	25.5255	25.5255
46	1.67133	32.8162	-6.53227	FN	4	25	10.4887	10.7447	19.0725	0	19.0725	20.2736	20.2736
47	1.67133	25.4054	-5.82864	FN	4	25	8.86619	9.08261	14.7952	0	14.7952	15.7003	15.7003
48	1.67133	16.7559	-5.1259	FN	4	25	6.94359	7.11308	9.72685	0	9.72685	10.3497	10.3497
49	1.67133	9.47108	-4.42394	FN	4	25	5.31254	5.44222	5.42703	0	5.42703	5.83804	5.83804
50	1.67133	3.70015	-3.72263	FN	4	25	4.01229	4.11023	1.99927	0	1.99927	2.26033	2.26033

Global Minimum Query (janbu simplified) - Safety Factor: 0.988403

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	2.3706	95.0151	-60.2032	R	0	35	12.6291	12.4826	21.3924	0	21.3924	43.4468	43.4468
2	2.3706	273.748	-56.9123	R	0	35	35.8094	35.3941	60.6576	0	60.6576	115.615	115.615
3	2.28881	416.91	-53.94	FN	4	25	48.8704	48.3036	115.727	0	115.727	182.843	182.843
4	2.28881	553.718	-51.2164	FN	4	25	100.232	99.0697	246.369	0	246.369	371.105	371.105
5	0.730814	203.837	-49.4906	FN	4	25	76.575	75.6869	189.806	3.61111	186.195	279.434	275.823
6	2.00024	619.513	-48.0049	AC alt	50	30	117.175	115.816	170.639	16.5217	154.117	300.798	284.276
7	2.00024	705.42	-45.8877	AC alt	50	30	127.771	126.289	210.226	34.3418	175.884	342.019	307.677
8	2.00024	776.419	-43.8485	AC alt	50	30	137.628	136.032	246.824	50.6882	196.136	379.028	328.34
9	2.00024	804.511	-41.8769	AC alt	50	30	140.964	139.329	268.5	65.5129	202.988	394.878	329.365
10	2.00024	843.406	-39.9645	AC alt	50	30	146.441	144.743	293.209	78.9702	214.239	415.933	336.963
11	2.00024	890.898	-38.1042	AC alt	50	30	153.758	151.975	320.596	91.3256	229.27	441.176	349.85
12	2.00024	906.056	-36.2903	AC alt	50	30	155.733	153.927	335.991	102.663	233.328	450.347	347.684
13	2.00024	912.147	-34.5176	AC alt	50	30	156.255	154.443	347.455	113.054	234.401	454.916	341.862
14	2.00024	913.943	-32.7819	AC alt	50	30	156.127	154.317	356.698	122.56	234.138	457.246	334.686
15	2.00024	911.556	-31.0795	AC alt	50	30	155.342	153.541	363.757	131.231	232.526	457.39	326.159
16	2.00024	908.234	-29.4071	AC alt	50	30	154.493	152.702	369.895	139.114	230.781	456.973	317.859
17	2.00024	905.215	-27.7618	AC alt	50	30	154.235	152.447	375.394	145.141	230.253	456.581	311.44
18	2.00024	900.878	-26.141	AC alt	50	30	154.352	152.562	379.656	149.166	230.49	455.409	306.243
19	2.00024	896.75	-24.5425	AC alt	50	30	154.672	152.879	383.657	152.506	231.151	454.284	301.778
20	2.00024	897.767	-22.964	AC alt	50	30	156.217	154.406	389.513	155.189	234.324	455.707	300.518
21	2.00024	895.579	-21.4038	AC alt	50	30	157.314	155.49	393.813	157.237	236.576	455.476	298.239
22	2.00024	876.487	-19.8601	AC alt	50	30	155.114	153.315	390.607	158.551	232.056	446.635	288.084
23	2.00024	856.669	-18.3313	AC alt	50	30	153.296	151.519	386.544	158.222	228.322	437.335	279.113
24	2.00024	847.643	-16.8159	AC alt	50	30	153.938	152.153	386.955	157.314	229.641	433.479	276.165
25	2.00024	836.065	-15.3126	AC alt	50	30	154.222	152.434	386.067	155.842	230.225	428.294	272.452
26	2.00024	820.774	-13.8199	AC alt	50	30	153.877	152.093	383.333	153.818	229.515	421.186	267.368
27	2.00024	803.137	-12.3368	AC alt	50	30	153.184	151.408	379.345	151.253	228.092	412.847	261.594
28	2.00024	787.42	-10.862	AC alt	50	30	153.105	151.33	376.088	148.158	227.93	405.466	257.308
29	2.00024	776.916	-9.39451	AC alt	50	30	155.211	153.411	375.043	142.788	232.255	400.723	257.935
30	2.00024	763.615	-7.9332	AC alt	50	30	157.579	155.752	372.563	135.441	237.122	394.522	259.081
31	2.00024	736.519	-6.47706	AC alt	50	30	156.935	155.115	363.382	127.584	235.798	381.199	253.615
32	2.00024	707.205	-5.02511	AC alt	50	30	155.95	154.142	352.998	119.223	233.775	366.711	247.488
33	2.00024	676.343	-3.5764	AC alt	50	30	154.777	152.982	341.726	110.362	231.364	351.4	241.038
34	2.00024	638.376	-2.12997	AC alt	50	30	152.028	150.265	326.719	101.002	225.717	332.374	231.372
35	2.00024	597.509	-0.684903	AC alt	50	30	148.699	146.975	310.025	91.1471	218.878	311.803	220.656
36	2.00024	553.408	0.75973	AC alt	50	30	144.684	143.006	291.425	80.7968	210.628	289.506	208.71
37	2.00024	507.95	2.20485	AC alt	50	30	139.31	137.695	271.814	72.2237	199.59	266.451	194.227
38	2.00024	470.446	3.65137	AC alt	50	30	135.588	134.016	256.172	64.2274	191.944	247.519	183.292
39	2.00024	449.08	5.10023	AC alt	50	30	136.346	134.765	249.233	55.7332	193.5	237.064	181.331
40	2.00024	426.076	6.55237	AC alt	50	30	136.957	135.369	241.494	46.7381	194.756	225.763	179.025
41	2.00024	393.016	8.00875	AC alt	50	30	135.089	133.522	228.157	37.2383	190.919	209.15	171.912
42	2.14214	379.083	9.52243	FN	4	25	71.1557	70.3305	199.266	26.8549	172.411	187.33	160.475
43	2.14214	331.423	11.095	FN	4	25	67.0332	66.2558	177.469	15.5435	161.925	164.323	148.78
44	2.14214	279.435	12.676	FN	4	25	61.963	61.2444	153.058	4.02919	149.029	139.121	135.092
45	2.21191	238.305	14.293	FN	4	25	54.1503	53.5223	129.157	0	129.157	115.361	115.361
46	2.21191	187.349	15.9479	FN	4	25	44.1256	43.6138	103.658	0	103.658	91.0485	91.0485
47	2.21191	134.697	17.6166	FN	4	25	33.3997	33.0123	76.3759	0	76.3759	65.7702	65.7702
48	2.21191	82.8337	19.3008	FN	4	25	22.4752	22.2145	48.5891	0	48.5891	40.718	40.718
49	2.21191	29.6258	21.0026	FN	4	25	10.8406	10.7149	18.9958	0	18.9958	14.8339	14.8339
50	0.562083	0.0643141	22.0772	R	0	35	0.0990885	0.0979394	0.167846	0	0.167846	0.127656	0.127656

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.02441

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	75.362	110.175	0	0	0
2	77.1896	108.506	9.32994	0	0
3	79.0172	106.896	29.379	0	0
4	80.8447	105.343	-755.979	0	0
5	82.6723	103.843	-724.923	0	0
6	84.4999	102.396	-687.364	0	0
7	86.3275	100.998	-649.693	0	0
8	88.155	99.6476	-613.36	0	0
9	89.9826	98.3435	-579.012	0	0
10	91.7672	97.113	-525.818	0	0
11	93.5518	95.9235	-474.881	0	0
12	95.3363	94.7738	-425.555	0	0
13	97.1209	93.6626	-378.045	0	0
14	98.9055	92.589	-332.528	0	0
15	100.69	91.5519	-288.424	0	0
16	102.475	90.5503	-245.03	0	0
17	104.259	89.5833	-203.024	0	0
18	106.044	88.6502	-165.173	0	0
19	107.828	87.7501	-131.996	0	0
20	109.343	87.0117	-105.101	0	0
21	110.857	86.2961	-78.9218	0	0
22	112.571	85.5135	-129.243	0	0
23	114.169	84.8089	-104.487	0	0
24	115.768	84.1284	-81.5949	0	0
25	117.367	83.4717	-60.6987	0	0
26	118.965	82.8385	-41.4106	0	0
27	120.564	82.2282	-25.2965	0	0
28	122.162	81.6407	-12.8103	0	0
29	123.761	81.0757	-4.66274	0	0
30	125.432	80.5086	0.0317875	0	0
31	127.104	79.9653	2.03998	0	0
32	128.775	79.4457	1.3863	0	0
33	130.446	78.9493	-1.68548	0	0
34	132.118	78.476	-6.844	0	0
35	133.789	78.0255	-13.7011	0	0
36	135.46	77.5975	-21.83	0	0
37	137.132	77.1919	-30.8371	0	0
38	138.803	76.8084	-40.8834	0	0
39	140.474	76.4468	-52.295	0	0
40	142.146	76.1071	-65.0497	0	0
41	143.817	75.7889	-78.637	0	0
42	145.488	75.4921	-92.6138	0	0
43	147.16	75.2167	-106.672	0	0
44	148.831	74.9625	-120.267	0	0
45	150.502	74.7293	-132.94	0	0
46	152.174	74.5171	-144.786	0	0
47	153.845	74.3257	-155.735	0	0
48	155.516	74.1551	-165.763	0	0
49	157.188	74.0052	-174.421	0	0
50	158.859	73.8758	-181.764	0	0
51	160.53	73.7671	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 0.988403

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	62.3614	109.74	0	0	0
2	64.732	105.6	67.7135	0	0
3	67.1026	101.962	228.808	0	0
4	69.3914	98.8189	519.008	0	0
5	71.6802	95.9705	724.996	0	0
6	72.411	95.1151	850.031	0	0
7	74.4113	92.8933	1051.15	0	0
8	76.4115	90.8301	1293.25	0	0
9	78.4118	88.9086	1562.59	0	0
10	80.412	87.1154	1835.04	0	0
11	82.4123	85.4391	2110.08	0	0
12	84.4125	83.8705	2386.19	0	0
13	86.4127	82.4017	2650.33	0	0
14	88.413	81.026	2898.44	0	0
15	90.4132	79.7378	3128.49	0	0
16	92.4135	78.5322	3338.97	0	0
17	94.4137	77.4048	3529.3	0	0
18	96.414	76.3519	3698.11	0	0
19	98.4142	75.3702	3843.74	0	0
20	100.414	74.4569	3966.06	0	0
21	102.415	73.6093	4065.11	0	0
22	104.415	72.8252	4140.39	0	0
23	106.415	72.1027	4191.79	0	0
24	108.415	71.44	4218.98	0	0
25	110.416	70.8355	4221.81	0	0
26	112.416	70.2878	4200.54	0	0
27	114.416	69.7958	4155.74	0	0
28	116.416	69.3583	4088.07	0	0
29	118.417	68.9745	3997.51	0	0
30	120.417	68.6435	3881.56	0	0
31	122.417	68.3648	3739.38	0	0
32	124.417	68.1377	3574.69	0	0
33	126.418	67.9618	3388.88	0	0
34	128.418	67.8368	3183.25	0	0
35	130.418	67.7624	2961.25	0	0
36	132.418	67.7385	2725.3	0	0
37	134.419	67.765	2478.23	0	0
38	136.419	67.8421	2224.59	0	0
39	138.419	67.9697	1963.22	0	0
40	140.419	68.1482	1686.59	0	0
41	142.42	68.378	1395.65	0	0
42	144.42	68.6594	1096.72	0	0
43	146.562	69.0187	907.038	0	0
44	148.704	69.4388	718.908	0	0
45	150.846	69.9206	537.725	0	0
46	153.058	70.4841	366.731	0	0
47	155.27	71.1162	220.559	0	0
48	157.482	71.8186	105.221	0	0
49	159.694	72.5932	25.3567	0	0
50	161.906	73.4424	-12.0812	0	0
51	162.468	73.6704	0	0	0

Discharge Sections

Entity Information

◆ Group 1

Shared Entities

Type	Coordinates (x,y)
	0, 105.172
	0, 90.7949
	0, 0
	224.8, 0
	224.8, 33.2248
	224.8, 47.639
	224.8, 51.7255
	224.8, 60.1858
	220, 60.8906
	217.108, 61.306
	215, 61.6062
	212.11, 62
	212.071, 62
	209.228, 63.3808
	207.974, 64
	206.637, 64.7073
	203.388, 66
	203.35, 66
	201.043, 66.3265
	200.015, 66.4868
	189.561, 68.1599
	180.929, 69.7279
	179.578, 70
	178.609, 70.1681
	173.002, 71.0998
	172.365, 71.3342
	168.681, 73.7377
	162.558, 73.7062
	162.021, 73.4937
	161.806, 73.4678
	159.538, 74
	159.115, 74
	156.509, 74.5516
	156.07, 74.6633
	155.468, 74.7953
	154.433, 75.1053
	153.504, 75.2827
	151.011, 76
	150.77, 76
	146.508, 77.58
	141.778, 79.1341
	140, 79.4671
	137.069, 80
	135.894, 80.5556


External Boundary

135.147, 80.9772
134.813, 81.1517
133.313, 82
130.592, 83.536
126.574, 85.693
124.53, 86.555
121.753, 88
116.74, 89.561
111.437, 91.992
110.418, 92.4394
109.289, 92.9208
107.965, 93.5041
106.747, 94
105.362, 94.9763
103.877, 96
100.121, 97.6016
99.1317, 98
98.3888, 98.407
98.05, 98.6028
95.6313, 100
92.3204, 102
90.4299, 103.291
85.6261, 106.43
83.069, 107.94
82.7686, 108
81.3305, 108.091
80.4706, 108.171
77.2182, 110.237
42.891, 109.09
40.9464, 107.89
38.5283, 108
38.3919, 108
36.5412, 108.447
36.2799, 108.468
35.6296, 108.62
34.32, 108.722
30, 109.059
29.0275, 109.129
28.5605, 109.064
28.2125, 109.082
27.4853, 109.123
27.0729, 109.062
25.9852, 109.131
25.8401, 109.119
25.4269, 109.15
25.1404, 109.135
25, 109.15
24.0015, 109.272
23.6841, 109.304
22.8677, 109.369
21.8359, 109.424
21.6229, 109.452
21.0395, 109.478
20.8856, 109.502
19.7208, 109.602
18.4961, 109.75
16.8586, 110
15.9388, 110.202
15.7926, 110.213

	14.8606, 110.426 14.3874, 110.454 14.0676, 110.493 13.1287, 110.69 12.4819, 110.78 11.7236, 110.947 10.9581, 111.058 10.5524, 111.131 10, 111.208 9.4744, 111.268 8.43102, 111.432 7.16405, 111.607 5.99273, 111.788 1.92584, 112.523 1.01792, 112.711 0, 112.941
Material Boundary	34.32, 108.722 36.7629, 106.06 37.6848, 104.794 38.6088, 103.813 41.3677, 102.32 52.8478, 98.8416 62.4798, 96.6998 68.0766, 95.9867 72.4935, 95.0985 86.3083, 92.8939 95.917, 91.011 111.751, 86.014 122.039, 79.732 128.272, 75.989 139.144, 70.512 149.826, 66.761 156.63, 64.662 165, 63.1188 190, 56.5558 205, 55.3693 224.8, 47.639
Material Boundary	36.7629, 106.06 41.2499, 103.535 48.3793, 102.146 62.7968, 101.98 68.3251, 101.957 81.5362, 100.628 88.8115, 98.4874 93.4185, 97.9213 98.05, 98.6028
Material Boundary	0, 90.7949 28.4966, 89.71 69.2971, 87.4727 83.8752, 81.3616 106.158, 71.8026 127.961, 58.8527 156.348, 50.4124 224.8, 33.2248

Material Boundary	161.806, 73.4678 165.873, 72.4339 166.799, 72.2099 167.586, 72 173.002, 71.0998
Material Boundary	40.9464, 107.89 41.4854, 107.495 79.5692, 107.495 80.4706, 108.171

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 105.172 35.2899, 100.839 62.29, 97.501 78.322, 94.888 94.49, 91.954 105.209, 88.701 118.326, 83.939 134.06, 75.65 149.57, 70.123 158.991, 68.629 167.404, 67.198 174.993, 65.3888 183.485, 62.5266 201.26, 57.2957 221.28, 52.6394 224.8, 51.7255	Assigned to: 
Distributed Load	73.5215, 110.113 43.516, 109.111	Constant DistributionOrientation: Normal to boundary Magnitude: 6 kN/m2 Creates Excess Pore Pressure: No



3+862 - statica

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

3+862 - statica

Project Summary

File Name:	3+862 - statica.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.464s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Left to Right

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	A2+M2+R2	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1.3	
Variable Actions: Favourable	1	
Effective cohesion	1.25	
Coefficient of shearing resistance	1.25	
Undrained strength	1.4	
Weight density	1	
Shear strength (other models)	1.25	
Earth resistance	1.1	
Tensile and plate strength	1	
Shear strength	1	
Compressive strength	1	
Bond strength	1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth [m]:	5
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Loading

1 Distributed Load present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	20
Orientation:	Normal to boundary
Load Action:	Live

Materials

AC

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	23
Cohesion [kPa]	100
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

AC alt

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	50
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

R

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19
Cohesion [kPa]	0
Friction Angle [deg]	35
Water Surface	Water Table
Hu Value	1

FN

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m ³]	19.5
Cohesion [kPa]	0
Friction Angle [deg]	25
Water Surface	Water Table
Hu Value	1

Support




pali

Color	
Type	Pile/Micro Pile
Force Application	Passive (Method B)
Force Orientation	Parallel to surface
Out-Of-Plane Spacing	0.5 m
Failure Mode	Shear
Pile Shear Strength	250 kN

Ancoraggio

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	1.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	50 kN/m
Material Dependent	Yes

Bond Strength Dependency

	Material	Bond Strength [kN/m]
	AC alt	80
	R	27
	FN	17

Global Minimums

Method: bishop simplified

FS	1.042930
Center:	182.078, 272.351
Radius:	199.167
Left Slip Surface Endpoint:	66.864, 109.891
Right Slip Surface Endpoint:	154.306, 75.129
Resisting Moment:	705940 kN-m
Driving Moment:	676885 kN-m
Passive Support Moment:	124721 kN-m
Maximum Single Support Force:	557.592 kN
Total Support Force:	1057.59 kN
Total Slice Area:	424.334 m ²
Surface Horizontal Width:	87.4424 m
Surface Average Height:	4.85272 m

Method: janbu simplified

FS	1.019910
Center:	125.473, 131.824
Radius:	62.735
Left Slip Surface Endpoint:	66.700, 109.885
Right Slip Surface Endpoint:	152.970, 75.436
Resisting Horizontal Force:	9341.57 kN
Driving Horizontal Force:	9159.25 kN
Passive Horizontal Support Force:	331.481 kN
Maximum Single Support Force:	466.709 kN
Total Support Force:	466.709 kN
Total Slice Area:	1404.08 m ²
Surface Horizontal Width:	86.2699 m
Surface Average Height:	16.2754 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	25.0163	6.25514	18.7612	6.25514	18.7612	557.592
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	20	7.11635	12.8837	7.11635	12.8837	500

Method: janbu simplified

Number of Supports: 2						
Ancoraggio						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	25.0163	12.3131	12.7032	12.3131	12.7032	466.709
pali						
Support Type: Pile/Micro Pile						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
80.4706, 108.171	20	Not Effective	Not Effective	Not Effective	Not Effective	0

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	5285
Number of Invalid Surfaces:	6

Error Codes

Error Code -112 reported for 6 surfaces

Method: janbu simplified

Number of Valid Surfaces:	5291
Number of Invalid Surfaces:	0

Error Code Descriptions

The following errors were encountered during the computation:

-112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi)/F) < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.04293

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	1.78148	22.1422	-35.0307	R	0	29.2561	13.6194	14.2041	27.8926	0	27.8926	37.4398	37.4398
2	1.78148	65.941	-34.4071	R	0	29.2561	22.4742	23.439	46.0273	0	46.0273	61.4198	61.4198
3	1.78148	108.779	-33.7882	R	0	29.2561	31.2441	32.5854	63.9882	0	63.9882	84.895	84.895
4	1.78148	150.678	-33.1738	R	0	29.2561	39.9282	41.6423	81.7734	0	81.7734	107.876	107.876
5	1.78148	191.656	-32.5636	R	0	29.2561	45.5692	47.5255	93.326	0	93.326	122.428	122.428
6	1.78148	231.022	-31.9575	R	0	29.2561	124.845	130.205	255.683	0	255.683	333.567	333.567
7	1.78148	243.194	-31.3554	R	0	29.2561	50.1796	52.3338	102.768	0	102.768	133.344	133.344
8	1.78148	243.353	-30.7572	R	0	29.2561	0	0	-1.47564	0	-1.47564	-1.47564	-1.47564
9	1.71581	257.136	-30.1735	FN	0	20.4579	40.3191	42.05	123.993	0	123.993	147.434	147.434
10	1.71581	275.621	-29.6042	FN	0	20.4579	43.3878	45.2504	133.43	0	133.43	158.082	158.082
11	1.71581	274.116	-29.038	FN	0	20.4579	43.3188	45.1785	133.217	0	133.217	157.267	157.267
12	1.71581	270.053	-28.475	FN	0	20.4579	42.8406	44.6797	131.747	0	131.747	154.983	154.983
13	1.71581	262.777	-27.9149	FN	0	20.4579	41.8445	43.6409	128.684	0	128.684	150.853	150.853
14	1.71581	254.864	-27.3577	FN	0	20.4579	40.7367	42.4855	125.277	0	125.277	146.355	146.355
15	1.71581	246.373	-26.8034	FN	0	20.4579	39.5255	41.2223	121.552	0	121.552	141.521	141.521
16	1.71581	240.578	-26.2517	FN	0	20.4579	38.7374	40.4004	119.128	0	119.128	138.233	138.233
17	1.71581	235.188	-25.7026	FN	0	20.4579	38.0069	39.6385	116.882	0	116.882	135.176	135.176
18	1.71581	230.222	-25.156	FN	0	20.4579	37.3381	38.941	114.825	0	114.825	132.36	132.36
19	1.71581	225.877	-24.6119	FN	0	20.4579	36.7636	38.3419	113.059	0	113.059	129.9	129.9
20	1.71581	227.102	-24.0701	FN	0	20.4579	37.0932	38.6856	114.072	0	114.072	130.641	130.641
21	1.67249	222.191	-23.5374	FN	0	20.4579	36.9967	38.585	115.065	1.28981	113.776	131.181	129.891
22	1.67249	218.864	-23.0137	FN	0	20.4579	35.8572	37.3965	114.052	3.78121	110.271	129.283	125.501
23	1.67249	204.496	-22.4919	FN	0	20.4579	33.1772	34.6015	107.11	5.08073	102.03	120.847	115.766
24	1.67249	196.194	-21.9721	FN	0	20.4579	31.6824	33.0425	103.199	5.76689	97.4324	115.982	110.215
25	1.67249	194.464	-21.4542	FN	0	20.4579	31.3458	32.6915	102.678	6.28028	96.3974	114.996	108.716
26	1.67249	192.052	-20.9382	FN	0	20.4579	30.938	32.2662	101.766	6.62276	95.1432	113.604	106.981
27	1.68879	191.366	-20.4214	FN	0	20.4579	30.5545	31.8662	100.76	6.79614	93.9642	112.136	105.34
28	1.68879	188.63	-19.9038	FN	0	20.4579	30.1867	31.4826	99.633	6.8005	92.8325	110.563	103.762
29	1.68879	185.512	-19.388	FN	0	20.4579	29.7986	31.0779	98.2753	6.63585	91.6394	108.762	102.126
30	1.68879	184.048	-18.8738	FN	0	20.4579	29.7396	31.0163	97.7614	6.30383	91.4576	107.928	101.625
31	1.68879	182.678	-18.3611	FN	0	20.4579	30.1887	31.4847	97.113	4.27398	92.839	107.133	102.859
32	1.68879	180.784	-17.85	FN	0	20.4579	30.7803	32.1017	96.1099	1.45171	94.6581	106.022	104.57
33	1.80184	188.498	-17.3233	FN	0	20.4579	30.5931	31.9065	94.0826	0	94.0826	103.625	103.625
34	1.80184	181.037	-16.7811	FN	0	20.4579	29.4808	30.7464	90.6616	0	90.6616	99.5518	99.5518
35	1.80184	172.98	-16.2404	FN	0	20.4579	28.2627	29.476	86.9161	0	86.9161	95.1487	95.1487
36	1.80184	160.894	-15.7013	FN	0	20.4579	26.3752	27.5075	81.1115	0	81.1115	88.5259	88.5259
37	1.80184	147.159	-15.1635	FN	0	20.4579	24.2034	25.2424	74.4322	0	74.4322	80.9916	80.9916
38	1.80184	122.806	-14.6271	FN	0	20.4579	20.2644	21.1343	62.3189	0	62.3189	67.6076	67.6076
39	1.80184	94.3649	-14.0921	FN	0	20.4579	15.6223	16.293	48.0432	0	48.0432	51.965	51.965
40	1.80184	73.9861	-13.5582	FN	0	20.4579	12.2886	12.8161	37.7909	0	37.7909	40.7543	40.7543
41	1.80184	60.3281	-13.0256	FN	0	20.4579	10.0526	10.4842	30.9148	0	30.9148	33.2403	33.2403
42	1.80184	61.423	-12.4941	FN	0	20.4579	10.2683	10.7091	31.5779	0	31.5779	33.8532	33.8532
43	1.80184	63.4828	-11.9637	FN	0	20.4579	10.6469	11.104	32.7423	0	32.7423	34.9983	34.9983
44	1.80184	63.9971	-11.4344	FN	0	20.4579	10.7678	11.2301	33.114	0	33.114	35.2919	35.2919
45	1.80184	63.0107	-10.906	FN	0	20.4579	10.6359	11.0925	32.7084	0	32.7084	34.7578	34.7578
46	1.80184	61.4175	-10.3786	FN	0	20.4579	10.4002	10.8467	31.9838	0	31.9838	33.8886	33.8886
47	1.80184	48.7329	-9.85206	FN	0	20.4579	8.27872	8.63413	25.4594	0	25.4594	26.8972	26.8972
48	1.80184	24.9188	-9.32636	FN	0	20.4579	4.24673	4.42904	13.0599	0	13.0599	13.7573	13.7573
49	1.80184	10.2406	-8.80145	FN	0	20.4579	1.75081	1.82597	5.38422	0	5.38422	5.65531	5.65531
50	1.80184	2.38164	-8.27728	FN	0	20.4579	0.408481	0.426017	1.25619	0	1.25619	1.31562	1.31562

Global Minimum Query (janbu simplified) - Safety Factor: 1.01991

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	1.85959	79.7347	-67.3268	R	0	29.2561	14.8851	15.1815	29.8119	0	29.8119	65.4427	65.4427
2	1.85959	225.707	-63.2371	R	0	29.2561	35.2841	35.9866	70.6669	0	70.6669	140.63	140.63
3	1.71675	319.738	-59.7926	FN	0	20.4579	81.6391	83.2645	245.522	0	245.522	385.75	385.75
4	1.71675	414.734	-56.8023	FN	0	20.4579	57.1385	58.2761	171.839	0	171.839	259.163	259.163
5	1.03798	292.901	-54.553	FN	0	20.4579	66.348	67.669	206	6.46463	199.535	299.199	292.734
6	1.73341	553.279	-52.4372	AC alt	40	24.7913	100.607	102.61	180.609	22.8381	157.771	311.425	288.587
7	1.73341	619.688	-49.9094	AC alt	40	24.7913	107.84	109.987	217.04	41.6999	175.34	345.146	303.447
8	1.73341	652.301	-47.5082	AC alt	40	24.7913	111.695	113.919	242.628	57.9251	184.703	364.556	306.631
9	1.73341	686.886	-45.2126	AC alt	40	24.7913	116.217	118.531	267.893	72.2053	195.687	384.976	312.77
10	1.73341	737.149	-43.0064	AC alt	40	24.7913	123.631	126.092	298.829	85.1344	213.695	414.143	329.008
11	1.73341	764.714	-40.877	AC alt	40	24.7913	127.565	130.105	320.107	96.8569	223.251	430.518	333.661
12	1.73341	777.523	-38.8141	AC alt	40	24.7913	129.166	131.738	334.629	107.489	227.14	438.534	331.045
13	1.73341	785.439	-36.8094	AC alt	40	24.7913	130.05	132.639	346.412	117.124	229.288	443.735	326.611
14	1.73341	788.991	-34.856	AC alt	40	24.7913	130.279	132.873	355.684	125.841	229.843	446.419	320.578
15	1.73341	789.459	-32.948	AC alt	40	24.7913	130.059	132.649	363.016	133.707	229.309	447.31	313.603
16	1.73341	788.962	-31.0804	AC alt	40	24.7913	129.771	132.355	369.386	140.775	228.611	447.609	306.834
17	1.73341	788.66	-29.2489	AC alt	40	24.7913	129.809	132.394	375.274	146.572	228.702	447.968	301.396
18	1.73341	786.823	-27.4496	AC alt	40	24.7913	129.898	132.484	379.935	151.017	228.918	447.411	296.394
19	1.73341	783.319	-25.6792	AC alt	40	24.7913	129.799	132.384	383.467	154.789	228.678	445.878	291.089
20	1.73341	782.35	-23.9348	AC alt	40	24.7913	130.338	132.933	387.905	157.918	229.987	445.758	287.84
21	1.73341	782.547	-22.2137	AC alt	40	24.7913	131.267	133.881	392.676	160.431	232.245	446.281	285.85
22	1.73341	779.895	-20.5134	AC alt	40	24.7913	131.787	134.41	395.857	162.352	233.505	445.166	282.814
23	1.73341	764.389	-18.8319	AC alt	40	24.7913	129.978	132.565	392.371	163.26	229.111	436.7	273.44
24	1.73341	745.667	-17.167	AC alt	40	24.7913	127.987	130.535	386.824	162.546	224.278	426.362	263.816
25	1.73341	736.929	-15.517	AC alt	40	24.7913	128.207	130.76	386.105	161.294	224.811	421.7	260.406
26	1.73341	726.932	-13.88	AC alt	40	24.7913	128.319	130.874	384.6	159.516	225.084	416.308	256.792
27	1.73341	715.456	-12.2546	AC alt	40	24.7913	128.274	130.828	382.197	157.224	224.973	410.059	252.835
28	1.73341	702.922	-10.6391	AC alt	40	24.7913	128.157	130.709	379.118	154.428	224.69	403.193	248.765
29	1.73341	688.725	-9.03214	AC alt	40	24.7913	127.835	130.38	375.044	151.138	223.906	395.364	244.226
30	1.73341	674.879	-7.43231	AC alt	40	24.7913	127.752	130.295	371.063	147.359	223.704	387.729	240.37
31	1.73341	660.514	-5.8383	AC alt	40	24.7913	128.2	130.752	366.676	141.882	224.794	379.785	237.903
32	1.73341	644.504	-4.24881	AC alt	40	24.7913	128.857	131.423	361.317	134.927	226.39	370.89	235.963
33	1.73341	625.734	-2.66259	AC alt	40	24.7913	129.07	131.639	354.403	127.497	226.906	360.405	232.908
34	1.73341	602.784	-1.07842	AC alt	40	24.7913	128.489	131.048	345.092	119.595	225.497	347.511	227.916
35	1.73341	578.447	0.50493	AC alt	40	24.7913	127.756	130.299	334.938	111.224	223.714	333.812	222.588
36	1.73341	549.802	2.08867	AC alt	40	24.7913	126.161	128.673	322.224	102.382	219.842	317.623	215.241
37	1.73341	518.123	3.674	AC alt	40	24.7913	123.988	126.457	307.632	93.0691	214.563	299.671	206.602
38	1.73341	479.474	5.26216	AC alt	40	24.7913	120.243	122.637	288.749	83.2833	205.465	277.674	194.391
39	1.73341	430.352	6.85439	AC alt	40	24.7913	113.987	116.256	263.291	73.0214	190.27	249.589	176.568
40	1.73341	386.937	8.45196	AC alt	40	24.7913	108.904	111.072	240.965	63.0412	177.924	224.782	161.741
41	1.73341	346.52	10.0562	AC alt	40	24.7913	104.029	106.1	220.133	54.0514	166.082	201.685	147.633
42	1.73341	318.056	11.6684	AC alt	40	24.7913	102.389	104.428	206.669	44.5691	162.1	185.524	140.955
43	1.57524	268.595	13.2156	FN	0	20.4579	49.2547	50.2354	183.193	35.0639	148.129	171.626	136.562
44	1.57524	247.519	14.6983	FN	0	20.4579	48.3708	49.3339	171.042	25.5715	145.471	158.354	132.783
45	1.57524	224.186	16.191	FN	0	20.4579	47.1052	48.0431	157.315	15.6501	141.665	143.637	127.987
46	1.57524	199.132	17.6952	FN	0	20.4579	45.5764	46.4838	142.357	5.29038	137.067	127.816	122.526
47	1.9105	205.742	19.3751	FN	0	20.4579	41.0741	41.8919	123.527	0	123.527	109.082	109.082
48	1.9105	150.778	21.236	FN	0	20.4579	30.5735	31.1822	91.9468	0	91.9468	80.0661	80.0661
49	1.9105	83.3946	23.1207	FN	0	20.4579	17.1901	17.5324	51.6974	0	51.6974	44.3579	44.3579
50	1.9105	26.8583	25.0323	FN	0	20.4579	5.63368	5.74585	16.9428	0	16.9428	14.3119	14.3119

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.04293

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	66.8641	109.891	0	0	0
2	68.6456	108.642	12.0376	0	0
3	70.4271	107.422	29.5749	0	0
4	72.2086	106.23	51.5561	0	0
5	73.99	105.065	76.971	0	0
6	75.7715	103.927	102.764	0	0
7	77.553	102.816	-215.954	0	0
8	79.3345	101.73	-194.086	0	0
9	81.1159	100.67	-607.637	0	0
10	82.8317	99.6727	-553.354	0	0
11	84.5476	98.6979	-497.966	0	0
12	86.2634	97.7453	-445.637	0	0
13	87.9792	96.8147	-396.777	0	0
14	89.695	95.9056	-351.831	0	0
15	91.4108	95.0178	-310.738	0	0
16	93.1266	94.151	-273.413	0	0
17	94.8424	93.3048	-239.291	0	0
18	96.5582	92.4789	-208.19	0	0
19	98.274	91.6731	-179.941	0	0
20	99.9898	90.8871	-154.365	0	0
21	101.706	90.1207	-130.789	0	0
22	103.378	89.3922	-109.042	0	0
23	105.051	88.6818	-88.1879	0	0
24	106.723	87.9893	-69.6863	0	0
25	108.396	87.3145	-53.2121	0	0
26	110.068	86.6572	-38.3234	0	0
27	111.741	86.0173	-25.1133	0	0
28	113.429	85.3885	-13.5281	0	0
29	115.118	84.7771	-3.75295	0	0
30	116.807	84.1827	4.16456	0	0
31	118.496	83.6054	10.2168	0	0
32	120.185	83.0449	13.4995	0	0
33	121.873	82.501	13.6149	0	0
34	123.675	81.939	11.1852	0	0
35	125.477	81.3957	7.15252	0	0
36	127.279	80.8708	1.67882	0	0
37	129.081	80.3643	-4.9173	0	0
38	130.883	79.876	-12.3249	0	0
39	132.684	79.4057	-19.6526	0	0
40	134.486	78.9534	-26.1631	0	0
41	136.288	78.5189	-31.9571	0	0
42	138.09	78.102	-37.2436	0	0
43	139.892	77.7028	-43.1984	0	0
44	141.694	77.321	-49.9445	0	0
45	143.495	76.9565	-57.3421	0	0
46	145.297	76.6093	-65.2138	0	0
47	147.099	76.2793	-73.4604	0	0
48	148.901	75.9664	-80.4597	0	0
49	150.703	75.6705	-84.2722	0	0
50	152.505	75.3915	-85.9352	0	0
51	154.306	75.1294	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.01991

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	66.6998	109.885	0	0	0
2	68.5594	105.434	106.728	0	0
3	70.4189	101.747	303.514	0	0
4	72.1357	98.7978	564.292	0	0
5	73.8524	96.1741	918.864	0	0
6	74.8904	94.716	1151.48	0	0
7	76.6238	92.4621	1385.01	0	0
8	78.3572	90.4029	1645.62	0	0
9	80.0907	88.5107	1911.75	0	0
10	81.8241	86.7644	2178.78	0	0
11	83.5575	85.1476	2448.33	0	0
12	85.2909	83.6473	2708.19	0	0
13	87.0243	82.2529	2951.63	0	0
14	88.7577	80.9557	3176.3	0	0
15	90.4911	79.7484	3380.62	0	0
16	92.2245	78.6249	3563.75	0	0
17	93.958	77.5801	3725.49	0	0
18	95.6914	76.6094	3865.5	0	0
19	97.4248	75.709	3983.17	0	0
20	99.1582	74.8755	4078.51	0	0
21	100.892	74.1061	4151.78	0	0
22	102.625	73.3982	4202.95	0	0
23	104.358	72.7497	4231.99	0	0
24	106.092	72.1585	4239.39	0	0
25	107.825	71.623	4225.4	0	0
26	109.559	71.1417	4189.71	0	0
27	111.292	70.7134	4132.74	0	0
28	113.026	70.3369	4055.02	0	0
29	114.759	70.0113	3957.05	0	0
30	116.492	69.7357	3839.52	0	0
31	118.226	69.5096	3702.71	0	0
32	119.959	69.3323	3546.2	0	0
33	121.693	69.2036	3370.1	0	0
34	123.426	69.123	3175.67	0	0
35	125.159	69.0903	2964.94	0	0
36	126.893	69.1056	2739.09	0	0
37	128.626	69.1688	2500.75	0	0
38	130.36	69.2801	2252.29	0	0
39	132.093	69.4398	1998.44	0	0
40	133.826	69.6481	1746.64	0	0
41	135.56	69.9057	1496.42	0	0
42	137.293	70.2131	1249.01	0	0
43	139.027	70.5711	998.127	0	0
44	140.602	70.941	853.026	0	0
45	142.177	71.3542	706.404	0	0
46	143.752	71.8116	560.492	0	0
47	145.328	72.3142	417.389	0	0
48	147.238	72.986	256.181	0	0
49	149.149	73.7285	129.698	0	0
50	151.059	74.5442	54.7936	0	0
51	152.97	75.4364	0	0	0

Discharge Sections

Entity Information

◆ Group 1

Shared Entities

Type	Coordinates (x,y)
	0, 105.172
	0, 90.7949
	0, 0
	224.8, 0
	224.8, 33.2248
	224.8, 47.639
	224.8, 51.7255
	224.8, 60.1858
	220, 60.8906
	217.108, 61.306
	215, 61.6062
	212.11, 62
	212.071, 62
	209.228, 63.3808
	207.974, 64
	206.637, 64.7073
	203.388, 66
	203.35, 66
	201.043, 66.3265
	200.015, 66.4868
	189.561, 68.1599
	180.929, 69.7279
	179.578, 70
	178.609, 70.1681
	173.002, 71.0998
	172.365, 71.3342
	168.681, 73.7377
	162.558, 73.7062
	162.021, 73.4937
	161.806, 73.4678
	159.538, 74
	159.115, 74
	156.509, 74.5516
	156.07, 74.6633
	155.468, 74.7953
	154.433, 75.1053
	153.504, 75.2827
	151.011, 76
	150.77, 76
	147.101, 78
	141.778, 79.1341
	140, 79.4671
	137.069, 80
	135.894, 80.5556


External Boundary

135.147, 80.9772
134.813, 81.1517
133.313, 82
130.62, 84
126.542, 86
125, 86.639
121.797, 88
121.753, 88
116.221, 90
111.437, 91.992
110.418, 92.4394
109.289, 92.9208
107.965, 93.5041
106.747, 94
105.362, 94.9763
103.877, 96
100.121, 97.6016
99.1317, 98
98.3888, 98.407
98.05, 98.6028
95.6313, 100
92.3204, 102
90.4299, 103.291
86.408, 106
85.6261, 106.43
84.4507, 107.233
83.069, 107.94
82.8787, 108
82.7686, 108
81.3305, 108.091
80.4706, 108.171
77.2182, 110.237
42.891, 109.09
40.9464, 107.89
38.5283, 108
38.3919, 108
36.5412, 108.447
36.2799, 108.468
35.6296, 108.62
34.32, 108.722
30, 109.059
29.0275, 109.129
28.5605, 109.064
28.2125, 109.082
27.4853, 109.123
27.0729, 109.062
25.9852, 109.131
25.8401, 109.119
25.4269, 109.15
25.1404, 109.135
25, 109.15
24.0015, 109.272
23.6841, 109.304
22.8677, 109.369
21.8359, 109.424
21.6229, 109.452
21.0395, 109.478
20.8856, 109.502
19.7208, 109.602

	18.4961, 109.75 16.8586, 110 15.9388, 110.202 15.7926, 110.213 14.8606, 110.426 14.3874, 110.454 14.0676, 110.493 13.1287, 110.69 12.4819, 110.78 11.7236, 110.947 10.9581, 111.058 10.5524, 111.131 10, 111.208 9.4744, 111.268 8.43102, 111.432 7.16405, 111.607 5.99273, 111.788 1.92584, 112.523 1.01792, 112.711 0, 112.941
Material Boundary	34.32, 108.722 36.7629, 106.06 37.6848, 104.794 38.6088, 103.813 41.3677, 102.32 52.8478, 98.8416 62.4798, 96.6998 68.0766, 95.9867 72.4935, 95.0985 86.3083, 92.8939 95.917, 91.011 111.751, 86.014 122.039, 79.732 128.272, 75.989 139.144, 70.512 149.826, 66.761 156.63, 64.662 165, 63.1188 190, 56.5558 205, 55.3693 224.8, 47.639
Material Boundary	36.7629, 106.06 41.2499, 103.535 48.3793, 102.146 62.7968, 101.98 68.3251, 101.957 81.5362, 100.628 88.8115, 98.4874 93.4185, 97.9213 98.05, 98.6028
Material Boundary	0, 90.7949 28.4966, 89.71 69.2971, 87.4727 83.8752, 81.3616 106.158, 71.8026 127.961, 58.8527 156.348, 50.4124 224.8, 33.2248

Material Boundary	161.806, 73.4678 165.873, 72.4339 166.799, 72.2099 167.586, 72 173.002, 71.0998
Material Boundary	40.9464, 107.89 41.4854, 107.495 79.5692, 107.495 80.4706, 108.171

Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 105.172 35.2899, 100.839 61.9528, 97.7793 78.0493, 95.608 94.047, 92.2523 104.719, 89.282 118.142, 84.3565 134.103, 76.419 149.367, 70.837 158.991, 68.629 167.404, 67.198 174.993, 65.3888 183.485, 62.5266 201.26, 57.2957 221.28, 52.6394 224.8, 51.7255	Assigned to: 
Distributed Load	75.2138, 110.17 44.4743, 109.143	Constant DistributionOrientation: Normal to boundary Magnitude: 20 kN/m2 Creates Excess Pore Pressure: No



sisma

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

sisma

Project Summary

File Name:	sisma.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.625s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Right to Left

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	M1+R2 fronti scavo sisma	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1	
Variable Actions: Favourable	1	
Effective cohesion	1	
Coefficient of shearing resistance	1	
Undrained strength	1	
Weight density	1	
Shear strength (other models)	1	
Earth resistance	1.2	
Tensile and plate strength	1	
Shear strength	1	
Compressive strength	1	
Bond strength	1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth [m]:	5
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.091
Seismic Load Coefficient (Vertical):	0.045

Loading

1 Distributed Load present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	6
Orientation:	Normal to boundary
Load Action:	Live

Materials

AC

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	23
Cohesion [kPa]	100
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

AC alt

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	20
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

Support

Support 1

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	2.5 m
Tensile Capacity	1000 kN
Plate Capacity	1000 kN
Bond Strength	70 kN/m
Material Dependent	No

Global Minimums

Method: bishop simplified

FS	1.664210
Center:	117.277, 72.137
Radius:	25.562
Left Slip Surface Endpoint:	111.908, 47.145
Right Slip Surface Endpoint:	138.459, 57.827
Resisting Moment:	39926.4 kN-m
Driving Moment:	23991.1 kN-m
Passive Support Moment:	1076.74 kN-m
Maximum Single Support Force:	55.4145 kN
Total Support Force:	55.4643 kN
Total Slice Area:	111.466 m ²
Surface Horizontal Width:	26.5513 m
Surface Average Height:	4.19813 m

Method: janbu simplified

FS	1.575040
Center:	119.495, 64.409
Radius:	19.080
Left Slip Surface Endpoint:	111.314, 47.172
Right Slip Surface Endpoint:	137.383, 57.770
Resisting Horizontal Force:	1591.57 kN
Driving Horizontal Force:	1010.5 kN
Passive Horizontal Support Force:	0.0664721 kN
Maximum Single Support Force:	0.0858732 kN
Total Support Force:	0.0858732 kN
Total Slice Area:	138.394 m ²
Surface Horizontal Width:	26.0691 m
Surface Average Height:	5.30873 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 3						
Support 1						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
115.518, 48.4946	5	3.02091	1.97909	3.02091	1.97909	55.4145
117.011, 49.9946	5	4.99822	0.00177929	4.99822	0.00177929	0.0498201
118.503, 51.4946	5	Not Effective	Not Effective	Not Effective	Not Effective	0

Method: janbu simplified

Number of Supports: 3						
Support 1						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
115.518, 48.4946	5	4.99693	0.0030669	4.99693	0.0030669	0.0858732
117.011, 49.9946	5	Not Effective	Not Effective	Not Effective	Not Effective	0
118.503, 51.4946	5	Not Effective	Not Effective	Not Effective	Not Effective	0

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	5369
Number of Invalid Surfaces:	5

Error Codes

Error Code -112 reported for 5 surfaces

Method: janbu simplified

Number of Valid Surfaces:	5374
Number of Invalid Surfaces:	0

Error Code Descriptions

The following errors were encountered during the computation:

-112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi)/F) < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.66421

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	0.531025	0.434261	-11.5182	AC alt	20	30	11.0422	18.3765	3.55385	0	3.55385	1.30363	1.30363
2	0.531025	1.24245	-10.3059	AC alt	20	30	11.4432	19.044	4.94107	0	4.94107	2.86026	2.86026
3	0.531025	1.93065	-9.09834	AC alt	20	30	11.7667	19.5822	6.05973	0	6.05973	4.17537	4.17537
4	0.531025	2.50017	-7.8948	AC alt	20	30	12.015	19.9954	6.91866	0	6.91866	5.25256	5.25256
5	0.531025	5.38702	-6.69475	AC alt	20	30	13.6346	22.6908	12.5209	0	12.5209	10.9205	10.9205
6	0.531025	11.4798	-5.49765	AC alt	20	30	17.1172	28.4866	24.5672	0	24.5672	22.9197	22.9197
7	0.531025	17.476	-4.30295	AC alt	20	30	20.4919	34.1029	36.2405	0	36.2405	34.6986	34.6986
8	0.531025	23.357	-3.11012	AC alt	20	30	23.7506	39.526	47.512	0	47.512	46.2215	46.2215
9	0.531025	29.1232	-1.91865	AC alt	20	30	26.896	44.7606	58.3922	0	58.3922	57.4912	57.4912
10	0.531025	34.775	-0.728	AC alt	20	30	29.9309	49.8113	68.8897	0	68.8897	68.5093	68.5093
11	0.531025	40.3125	0.462332	AC alt	20	30	32.8575	54.6817	79.0125	0	79.0125	79.2777	79.2777
12	0.531025	45.7357	1.65286	AC alt	20	30	47.0367	78.2789	128.059	0	128.059	129.416	129.416
13	0.531025	51.0446	2.84411	AC alt	20	30	38.3936	63.895	98.162	0	98.162	100.069	100.069
14	0.531025	55.0992	4.03659	AC alt	20	30	40.3738	67.1904	105.012	0	105.012	107.861	107.861
15	0.531025	55.007	5.23083	AC alt	20	30	40.0382	66.632	103.851	0	103.851	107.516	107.516
16	0.531025	54.4456	6.42734	AC alt	20	30	39.4488	65.6511	101.812	0	101.812	106.256	106.256
17	0.531025	53.7677	7.62669	AC alt	20	30	38.8123	64.5919	99.6105	0	99.6105	104.808	104.808
18	0.531025	54.3619	8.8294	AC alt	20	30	38.8495	64.6538	99.7394	0	99.7394	105.774	105.774
19	0.531025	57.0417	10.0361	AC alt	20	30	40.0113	66.5872	103.758	0	103.758	110.839	110.839
20	0.531025	59.6298	11.2472	AC alt	20	30	41.1046	68.4067	107.54	0	107.54	115.714	115.714
21	0.531025	62.0967	12.4635	AC alt	20	30	42.1147	70.0877	111.033	0	111.033	120.342	120.342
22	0.531025	64.4409	13.6855	AC alt	20	30	43.0417	71.6305	114.24	0	114.24	124.721	124.721
23	0.531025	66.6605	14.9139	AC alt	20	30	43.8857	73.0351	117.16	0	117.16	128.848	128.848
24	0.531025	68.7535	16.1494	AC alt	20	30	44.6465	74.3012	119.791	0	119.791	132.719	132.719
25	0.531025	70.0894	17.3926	AC alt	20	30	45.0015	74.892	121.019	0	121.019	135.115	135.115
26	0.531025	69.2818	18.6444	AC alt	20	30	44.2526	73.6457	118.429	0	118.429	133.359	133.359
27	0.531025	68.1887	19.9054	AC alt	20	30	43.3633	72.1657	115.353	0	115.353	131.055	131.055
28	0.531025	66.9582	21.1766	AC alt	20	30	42.4108	70.5804	112.058	0	112.058	128.488	128.488
29	0.531025	65.8098	22.4588	AC alt	20	30	41.5053	69.0736	108.926	0	108.926	126.083	126.083
30	0.531025	64.7273	23.753	AC alt	20	30	40.6375	67.6294	105.924	0	105.924	123.807	123.807
31	0.531025	63.4956	25.0602	AC alt	20	30	39.7009	66.0707	102.684	0	102.684	121.248	121.248
32	0.531025	62.1102	26.3815	AC alt	20	30	38.6946	64.396	99.2034	0	99.2034	118.396	118.396
33	0.531025	60.567	27.7181	AC alt	20	30	37.6181	62.6045	95.4798	0	95.4798	115.245	115.245
34	0.531025	59.0501	29.0713	AC alt	20	30	36.5608	60.8449	91.8226	0	91.8226	112.148	112.148
35	0.531025	57.5009	30.4425	AC alt	20	30	35.4941	59.0697	88.133	0	88.133	108.993	108.993
36	0.531025	55.7914	31.8333	AC alt	20	30	34.3583	57.1794	84.2041	0	84.2041	105.535	105.535
37	0.531025	53.94	33.2454	AC alt	20	30	33.1634	55.1908	80.0708	0	80.0708	101.81	101.81
38	0.531025	51.9894	34.6808	AC alt	20	30	31.9306	53.1392	75.8066	0	75.8066	97.9005	97.9005
39	0.531025	50.2796	36.1414	AC alt	20	30	30.8153	51.2831	71.9487	0	71.9487	94.4537	94.4537
40	0.531025	48.521	37.6298	AC alt	20	30	29.6833	49.3993	68.0334	0	68.0334	90.9173	90.9173
41	0.531025	47.339	39.1487	AC alt	20	30	28.8125	47.95	65.0212	0	65.0212	88.4771	88.4771
42	0.531025	44.752	40.7012	AC alt	20	30	27.3242	45.4732	59.8732	0	59.8732	83.3767	83.3767
43	0.531025	41.2083	42.2907	AC alt	20	30	25.4353	42.3297	53.3394	0	53.3394	76.4762	76.4762
44	0.531025	37.6407	43.9215	AC alt	20	30	23.5606	39.2098	46.8549	0	46.8549	69.5449	69.5449
45	0.531025	33.7334	45.5983	AC alt	20	30	21.5686	35.8947	39.9647	0	39.9647	61.9886	61.9886
46	0.531025	28.5616	47.327	AC alt	20	30	19.0849	31.7612	31.3734	0	31.3734	52.075	52.075
47	0.531025	23.4429	49.1142	AC alt	20	30	16.6734	27.748	23.032	0	23.032	42.29	42.29
48	0.531025	17.7049	50.9685	AC alt	20	30	14.0691	23.4139	14.0237	0	14.0237	31.3781	31.3781
49	0.531025	11.0238	52.9003	AC alt	20	30	11.1662	18.5829	3.98276	0	3.98276	18.7473	18.7473
50	0.531025	3.76789	54.9225	AC alt	20	30	8.13897	13.545	-6.48841	0	-6.48841	5.10186	5.10186

Global Minimum Query (janbu simplified) - Safety Factor: 1.57504

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	0.521381	1.08814	-24.5314	AC alt	20	30	14.0515	22.1317	11.3587	0	11.3587	4.94577	4.94577
2	0.521381	3.17011	-22.8215	AC alt	20	30	14.8141	23.3328	13.8552	0	13.8552	7.62138	7.62138
3	0.521381	5.06692	-21.1328	AC alt	20	30	15.9502	25.1222	17.5743	0	17.5743	11.4092	11.4092
4	0.521381	6.78507	-19.4632	AC alt	20	30	16.9359	26.6747	20.8013	0	20.8013	14.8162	14.8162
5	0.521381	8.33026	-17.8106	AC alt	20	30	17.7818	28.0071	23.5706	0	23.5706	17.8578	17.8578
6	0.521381	11.0851	-16.1732	AC alt	20	30	19.4412	30.6206	29.0026	0	29.0026	23.3642	23.3642
7	0.521381	17.6226	-14.5493	AC alt	20	30	23.6251	37.2104	42.6991	0	42.6991	36.5676	36.5676
8	0.521381	24.2453	-12.9372	AC alt	20	30	27.7708	43.7401	56.271	0	56.271	49.8917	49.8917
9	0.521381	30.7113	-11.3355	AC alt	20	30	31.7222	49.9638	69.2066	0	69.2066	62.8474	62.8474
10	0.521381	37.0236	-9.74278	AC alt	20	30	35.4893	55.897	81.5388	0	81.5388	75.4452	75.4452
11	0.521381	43.1845	-8.15759	AC alt	20	30	39.0806	61.5535	93.2956	0	93.2956	87.6935	87.6935
12	0.521381	49.196	-6.57867	AC alt	20	30	42.5037	66.9451	104.502	0	104.502	99.5998	99.5998
13	0.521381	55.0597	-5.00475	AC alt	20	30	45.7651	72.0819	115.178	0	115.178	111.17	111.17
14	0.521381	60.7767	-3.43462	AC alt	20	30	48.8704	76.9728	125.344	0	125.344	122.411	122.411
15	0.521381	66.1737	-1.86707	AC alt	20	30	51.7161	81.455	134.66	0	134.66	132.974	132.974
16	0.521381	67.7483	-0.300911	AC alt	20	30	52.1815	82.188	136.184	0	136.184	135.909	135.909
17	0.521381	67.7037	1.26502	AC alt	20	30	51.6142	81.2945	134.327	0	134.327	135.466	135.466
18	0.521381	67.5141	2.8319	AC alt	20	30	50.99	80.3113	132.283	0	132.283	134.805	134.805
19	0.521381	67.4868	4.4009	AC alt	20	30	50.4726	79.4964	130.589	0	130.589	134.473	134.473
20	0.521381	69.9093	5.97322	AC alt	20	30	51.4065	80.9673	133.646	0	133.646	139.025	139.025
21	0.521381	72.7717	7.55007	AC alt	20	30	52.5747	82.8072	137.471	0	137.471	144.439	144.439
22	0.521381	75.4854	9.13269	AC alt	20	30	53.6285	84.4671	140.92	0	140.92	149.542	149.542
23	0.521381	78.0485	10.7224	AC alt	20	30	54.5686	85.9477	143.998	0	143.998	154.331	154.331
24	0.521381	80.4587	12.3205	AC alt	20	30	55.3952	87.2496	146.704	0	146.704	158.803	158.803
25	0.521381	82.7136	13.9284	AC alt	20	30	56.1082	88.3726	149.038	0	149.038	162.953	162.953
26	0.521381	84.8009	15.5476	AC alt	20	30	56.7022	89.3082	150.982	0	150.982	166.758	166.758
27	0.521381	85.1791	17.1796	AC alt	20	30	56.331	88.7235	149.767	0	149.767	167.183	167.183
28	0.521381	84.2563	18.8261	AC alt	20	30	55.2442	87.0118	146.21	0	146.21	165.044	165.044
29	0.521381	83.1625	20.489	AC alt	20	30	54.0711	85.1641	142.369	0	142.369	162.574	162.574
30	0.521381	81.9191	22.1701	AC alt	20	30	52.8244	83.2005	138.288	0	138.288	159.813	159.813
31	0.521381	80.7984	23.8716	AC alt	20	30	51.6487	81.3487	134.439	0	134.439	157.296	157.296
32	0.521381	79.5742	25.5957	AC alt	20	30	50.4224	79.4173	130.425	0	130.425	154.579	154.579
33	0.521381	78.1523	27.3451	AC alt	20	30	49.0974	77.3304	126.087	0	126.087	151.477	151.477
34	0.521381	76.5234	29.1227	AC alt	20	30	47.6709	75.0835	121.417	0	121.417	147.975	147.975
35	0.521381	74.6951	30.9315	AC alt	20	30	46.1486	72.6859	116.434	0	116.434	144.088	144.088
36	0.521381	72.8676	32.7753	AC alt	20	30	44.632	70.2972	111.469	0	111.469	140.205	140.205
37	0.521381	70.8666	34.6582	AC alt	20	30	43.0336	67.7797	106.236	0	106.236	135.988	135.988
38	0.521381	68.6313	36.5849	AC alt	20	30	41.3258	65.0898	100.646	0	100.646	131.32	131.32
39	0.521381	66.1587	38.561	AC alt	20	30	39.5098	62.2295	94.7006	0	94.7006	126.197	126.197
40	0.521381	63.5154	40.5932	AC alt	20	30	37.6196	59.2523	88.5124	0	88.5124	120.749	120.749
41	0.521381	60.9686	42.6893	AC alt	20	30	35.7784	56.3524	82.4852	0	82.4852	115.488	115.488
42	0.521381	58.2394	44.8589	AC alt	20	30	33.8553	53.3235	76.1897	0	76.1897	109.879	109.879
43	0.521381	55.7974	47.1137	AC alt	20	30	32.057	50.491	70.3023	0	70.3023	104.816	104.816
44	0.521381	51.6774	49.4688	AC alt	20	30	29.5272	46.5065	62.0209	0	62.0209	96.5547	96.5547
45	0.521381	46.4386	51.9436	AC alt	20	30	26.5485	41.8149	52.2696	0	52.2696	86.1812	86.1812
46	0.521381	40.8958	54.5639	AC alt	20	30	23.4876	36.9939	42.2494	0	42.2494	75.2557	75.2557
47	0.521381	34.4811	57.3661	AC alt	20	30	20.1349	31.7132	31.2737	0	31.2737	62.7167	62.7167
48	0.521381	26.2597	60.4032	AC alt	20	30	16.1851	25.4922	18.3436	0	18.3436	46.8383	46.8383
49	0.521381	17.2284	63.7592	AC alt	20	30	12.104	19.0643	4.98342	0	4.98342	29.538	29.538
50	0.521381	6.23046	67.5834	AC alt	20	30	7.61275	11.9904	-9.7195	0	-9.7195	8.73524	8.73524

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.66421

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	111.908	47.1449	0	0	0
2	112.439	47.0367	6.20659	0	0
3	112.97	46.9401	12.6451	0	0
4	113.501	46.8551	19.2308	0	0
5	114.032	46.7815	25.8907	0	0
6	114.563	46.7191	33.4185	0	0
7	115.094	46.668	42.7158	0	0
8	115.625	46.6281	53.4513	0	0
9	116.156	46.5992	65.3042	0	0
10	116.687	46.5814	77.97	0	0
11	117.218	46.5747	91.1585	0	0
12	117.749	46.579	104.593	0	0
13	118.28	46.5943	149.212	0	0
14	118.811	46.6207	162.358	0	0
15	119.342	46.6581	174.841	0	0
16	119.873	46.7068	186.04	0	0
17	120.404	46.7666	195.935	0	0
18	120.935	46.8377	204.586	0	0
19	121.466	46.9202	212.034	0	0
20	121.997	47.0141	218.332	0	0
21	122.528	47.1197	223.369	0	0
22	123.059	47.2371	227.041	0	0
23	123.59	47.3664	229.253	0	0
24	124.121	47.5079	229.913	0	0
25	124.652	47.6616	228.936	0	0
26	125.183	47.828	226.316	0	0
27	125.714	48.0071	222.283	0	0
28	126.245	48.1994	216.916	0	0
29	126.777	48.4051	210.283	0	0
30	127.308	48.6246	202.417	0	0
31	127.839	48.8583	193.345	0	0
32	128.37	49.1066	183.144	0	0
33	128.901	49.37	171.904	0	0
34	129.432	49.649	159.721	0	0
35	129.963	49.9443	146.648	0	0
36	130.494	50.2563	132.752	0	0
37	131.025	50.586	118.153	0	0
38	131.556	50.9341	102.977	0	0
39	132.087	51.3015	87.3413	0	0
40	132.618	51.6894	71.2205	0	0
41	133.149	52.0987	54.71	0	0
42	133.68	52.531	37.5879	0	0
43	134.211	52.9878	20.6715	0	0
44	134.742	53.4709	4.65842	0	0
45	135.273	53.9823	-10.2218	0	0
46	135.804	54.5245	-23.5125	0	0
47	136.335	55.1005	-34.0521	0	0
48	136.866	55.7138	-41.4612	0	0
49	137.397	56.3689	-44.7899	0	0
50	137.928	57.071	-42.6622	0	0
51	138.459	57.8272	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.57504

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	111.314	47.1721	0	0	0
2	111.835	46.9342	9.91545	0	0
3	112.357	46.7148	20.412	0	0
4	112.878	46.5133	31.8319	0	0
5	113.399	46.329	43.9018	0	0
6	113.921	46.1615	56.3888	0	0
7	114.442	46.0103	69.93	0	0
8	114.964	45.875	86.4562	0	0
9	115.485	45.7552	105.509	0	0
10	116.006	45.6507	126.533	0	0
11	116.528	45.5612	149.018	0	0
12	117.049	45.4864	172.494	0	0
13	117.57	45.4263	196.523	0	0
14	118.092	45.3806	220.698	0	0
15	118.613	45.3493	244.641	0	0
16	119.135	45.3324	267.947	0	0
17	119.656	45.3296	289.479	0	0
18	120.177	45.3411	308.757	0	0
19	120.699	45.3669	325.86	0	0
20	121.22	45.407	340.868	0	0
21	121.741	45.4616	354.092	0	0
22	122.263	45.5307	365.458	0	0
23	122.784	45.6145	374.815	0	0
24	123.306	45.7132	382.027	0	0
25	123.827	45.8271	386.961	0	0
26	124.348	45.9564	389.498	0	0
27	124.87	46.1015	389.526	0	0
28	125.391	46.2627	387.085	0	0
29	125.913	46.4404	382.311	0	0
30	126.434	46.6353	375.277	0	0
31	126.955	46.8477	366.06	0	0
32	127.477	47.0784	354.692	0	0
33	127.998	47.3282	341.238	0	0
34	128.519	47.5978	325.8	0	0
35	129.041	47.8883	308.492	0	0
36	129.562	48.2007	289.445	0	0
37	130.084	48.5364	268.731	0	0
38	130.605	48.8969	246.487	0	0
39	131.126	49.2839	222.899	0	0
40	131.648	49.6995	198.174	0	0
41	132.169	50.1463	172.518	0	0
42	132.69	50.6272	146.006	0	0
43	133.212	51.146	118.878	0	0
44	133.733	51.7074	91.0972	0	0
45	134.255	52.3172	64.0128	0	0
46	134.776	52.9831	38.8565	0	0
47	135.297	53.7158	16.4599	0	0
48	135.819	54.53	-1.61378	0	0
49	136.34	55.4479	-12.3792	0	0
50	136.862	56.5056	-12.8895	0	0
51	137.383	57.7695	0	0	0

Discharge Sections

Entity Information

◆ Group 1

Shared Entities

Type	Coordinates (x,y)
	80.7007, 55.2418
	80.4259, 55.2446
	78.4198, 55.5911
	77.7056, 55.6215
	75, 55.7387
	69.3784, 56
	68.5219, 56
	62.8617, 57.2942
	59.2648, 58
	58.579, 58.1125
	53.9303, 58.9269
	49.2742, 59.7583
	47.9853, 60
	45.4516, 60.5635
	39.5932, 61.8512
	36.8861, 62.4679
	32.2882, 63.5002
	30, 63.9926
	29.6802, 64.0685
	29.5466, 64.0882
	26.2905, 64.7615
	25, 65.0209
	20.3275, 65.9782
	18.4362, 66.4057
	18.1143, 66.4366
	17.3143, 66.6093
	13.2792, 67.2667
	9.51379, 68
	5.53814, 68.7211
	0, 69.7719
	0, 48.7719
	0, 48.5949
	0, 0
	184.033, 0
	184.033, 24.404
	184.033, 31.6434
	184.033, 52.6434
	183.47, 52.8208
	181.22, 53.6265
	180.825, 53.7532
	180.115, 54
	179.207, 54.1746
	178.462, 54.2947
	178.299, 54.331

External Boundary	176.831, 54.5814
	176.401, 54.6744
	175.242, 54.8892
	173.738, 55.1973
	172.761, 55.3515
	171.606, 55.587
	171.008, 55.69
	170.026, 55.8821
	169.472, 56
	168.732, 56.0947
	165.967, 56.4021
	164.424, 56.5467
	162.573, 56.7591
	161.512, 56.8552
	161.173, 56.9013
	160.322, 56.9728
	159.398, 57.0948
	158.254, 57.1868
	156.498, 57.4122
	156.087, 57.4428
	154.467, 57.6287
	153.464, 57.7282
	153.161, 57.7339
	152.271, 57.8184
	151.106, 57.8775
	150.352, 57.8994
	149.636, 57.9309
	148.638, 57.9998
	144.294, 58
	142.282, 57.937
	140.117, 57.9161
	137.146, 57.7569
	136.752, 57.7096
	136.574, 57.6696
	136.316, 57.5966
	135.402, 57.5006
	134.748, 57.27
	133.928, 57.0853
	133.512, 56.9336
	133.388, 56.9015
	132.999, 56.6218
	131.867, 56.1477
	131.185, 55.9363
	130.56, 55.7496
	129.387, 55.4092
	126.769, 54.8074
	124.827, 54.5144
	121.001, 51.9946
	119.001, 51.9946
	114.075, 47.0456
	99.0896, 47.7324
	96.2495, 47.4714
	80.6803, 48.758
	80.7007, 55.2416
	0, 48.7719
	5.53814, 47.7211
	9.51379, 47
	13.2792, 46.2667
	17.3143, 45.6093



18.1143, 45.4366
18.4362, 45.4057
20.3275, 44.9782
25, 44.0209
26.2905, 43.7615
29.5466, 43.0882
29.6802, 43.0685
30, 42.9926
32.2882, 42.5002
36.8861, 41.4679
39.5932, 40.8512
45.4516, 39.5635
47.9853, 39
49.2742, 38.7583
53.9303, 37.9269
58.579, 37.1125
59.2648, 37
62.8617, 36.2942
68.5219, 35
69.3784, 35
75, 34.7387
77.7056, 34.6215
78.4198, 34.5911
80.4259, 34.2446
81.1279, 34.2376
82.7023, 34.2573
90.2703, 34.077
91.2087, 34.062
100.335, 33.7173
101.761, 33.3725
102.645, 33.2768
103.569, 33.2121
104.617, 33.1715
106.081, 33.3299
106.327, 33.3175
106.453, 33.3331
106.775, 33.3309
106.904, 33.3459
107.477, 33.3506
107.952, 33.4031
108.831, 33.4454
110.732, 33.612
112.312, 33.7601
115.18, 33.8483
115.623, 33.8852
116.011, 33.8708
116.384, 33.8994
116.777, 33.8889
118.214, 34.0152
119.411, 34.0046
120, 34.058
120.681, 34.0362
121.081, 34.0028
121.452, 34.052
121.902, 34.0013
122.481, 34.0811
122.636, 34.0649
122.804, 34.0601
123.335, 34.1178

Material Boundary

123.662, 34.1152
124.672, 34.1802
125.169, 34.1948
125.947, 34.2379
126.405, 34.2901
127.096, 34.3498
128.158, 34.4881
129.026, 34.6315
130.275, 34.8792
130.765, 35
131.584, 35.2869
132.086, 35.476
132.61, 35.6218
133.388, 35.9015
133.512, 35.9336
133.928, 36.0853
134.748, 36.27
135.402, 36.5006
136.316, 36.5966
136.574, 36.6696
136.752, 36.7096
137.146, 36.7569
140.117, 36.9161
142.282, 36.937
144.294, 37
148.638, 36.9998
149.636, 36.9309
150.352, 36.8994
151.106, 36.8775
152.271, 36.8184
153.161, 36.7339
153.464, 36.7282
154.467, 36.6287
156.087, 36.4428
156.498, 36.4122
158.254, 36.1868
159.398, 36.0948
160.322, 35.9728
161.173, 35.9013
161.512, 35.8552
162.573, 35.7591
164.424, 35.5467
165.967, 35.4021
168.732, 35.0947
169.472, 35
170.026, 34.8821
171.008, 34.69
171.606, 34.587
172.761, 34.3515
173.738, 34.1973
175.242, 33.8892
176.401, 33.6744
176.831, 33.5814
178.299, 33.331
178.462, 33.2947
179.207, 33.1746
180.115, 33
180.825, 32.7532
181.22, 32.6265

	183.47, 31.8208 184.033, 31.6434
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Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 48.5949 32.8298, 43.1506 43.6842, 41.9077 57.4431, 39.6825 71.6924, 36.5942 88.5962, 34.1525 100, 32.62 109.428, 31.9443 130, 30.5078 138.943, 30.3173 154.188, 29.5555 164.479, 28.7937 170.387, 27.651 184.033, 24.404	Assigned to:  AC  AC alt
Distributed Load	111.441, 47.1663 99.0896, 47.7324 96.2495, 47.4714 83.1575, 48.5533	Constant DistributionOrientation: Normal to boundaryMagnitude: 6 kN/m2Creates Excess Pore Pressure: No



3+475

Slide2 - An Interactive Slope Stability Program

Date Created: 19/07/2023, 15:19:31

Software Version: 9.027

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Slide2 Analysis Information

3+475

Project Summary

File Name:	3+475.slmd
Slide2 Modeler Version:	9.027
Compute Time:	00h:00m:01.359s
Project Title:	Slide2 - An Interactive Slope Stability Program
Date Created:	19/07/2023, 15:19:31

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Metric Units

days

meters/second

Standard

Right to Left

Design Standard

Selected Type:	Eurocode 7 (User Defined)	
Name:	A2+M2+R2	
	Type	Partial Factor
Permanent Actions: Unfavourable	1	
Permanent Actions: Favourable	1	
Variable Actions: Unfavourable	1.3	
Variable Actions: Favourable	1	
Effective cohesion	1.25	
Coefficient of shearing resistance	1.25	
Undrained strength	1.4	
Weight density	1	
Shear strength (other models)	1.25	
Earth resistance	1.1	
Tensile and plate strength	1.1	
Shear strength	1.1	
Compressive strength	1.1	
Bond strength	1.1	
Seismic Coefficient	1	

Analysis Options

Slices Type:	Vertical
	Analysis Methods Used
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes
Eliminate vertical segments in non-circular search	Yes

Groundwater Analysis

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [kN/m ³]:	9.81
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [kPa]:	0
Advanced Groundwater Method:	None

Random Numbers

Pseudo-random Seed:

10116

Random Number Generation Method:

Park and Miller v.3

Surface Options

Surface Type:	Circular
Search Method:	Auto Refine Search
Divisions along slope:	20
Circles per division:	10
Number of iterations:	10
Divisions to use in next iteration:	50%
Composite Surfaces:	Disabled
Minimum Elevation:	Not Defined
Minimum Depth [m]:	5
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Loading

1 Distributed Load present

Distributed Load 1

Distribution:	Constant
Magnitude [kPa]:	20
Orientation:	Normal to boundary
Load Action:	Live

Materials

AC


Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	23
Cohesion [kPa]	100
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

AC alt

Color	
Strength Type	Mohr-Coulomb
Unit Weight [kN/m3]	19.5
Cohesion [kPa]	20
Friction Angle [deg]	30
Water Surface	Water Table
Hu Value	1

Support

Support 1

Color	
Type	Soil Nail
Force Application	Passive (Method B)
Force Orientation	Parallel to Reinforcement
Out-Of-Plane Spacing	2.5 m
Tensile Capacity	150 kN
Plate Capacity	100 kN
Bond Strength	70 kN/m
Material Dependent	No

Global Minimums

Method: bishop simplified

FS	1.812490
Center:	116.674, 60.361
Radius:	14.173
Left Slip Surface Endpoint:	111.507, 47.163
Right Slip Surface Endpoint:	130.021, 55.593
Resisting Moment:	12703.6 kN-m
Driving Moment:	7008.92 kN-m
Passive Support Moment:	376.885 kN-m
Maximum Single Support Force:	38.0025 kN
Total Support Force:	38.0025 kN
Total Slice Area:	67.3997 m ²
Surface Horizontal Width:	18.5143 m
Surface Average Height:	3.6404 m

Method: janbu simplified

FS	1.690670
Center:	117.012, 57.948
Radius:	12.031
Left Slip Surface Endpoint:	111.700, 47.154
Right Slip Surface Endpoint:	128.739, 55.260
Resisting Horizontal Force:	728.83 kN
Driving Horizontal Force:	431.089 kN
Passive Horizontal Support Force:	21.3989 kN
Maximum Single Support Force:	27.6446 kN
Total Support Force:	27.6446 kN
Total Slice Area:	65.5722 m ²
Surface Horizontal Width:	17.0389 m
Surface Average Height:	3.84839 m

Global Minimum Support Data

Method: bishop simplified

Number of Supports: 3						
Support 1						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
115.518, 48.4946	5	3.50705	1.49295	3.50705	1.49295	38.0025
117.011, 49.9946	5	Not Effective	Not Effective	Not Effective	Not Effective	0
118.503, 51.4946	5	Not Effective	Not Effective	Not Effective	Not Effective	0

Method: janbu simplified

Number of Supports: 3						
Support 1						
Support Type: Soil Nail						
Start (x, y)	Length (m)	L Inside SS (m)	L Outside SS (m)	Li (m)	Lo (m)	Force (kN)
115.518, 48.4946	5	3.91396	1.08604	3.91396	1.08604	27.6446
117.011, 49.9946	5	Not Effective	Not Effective	Not Effective	Not Effective	0
118.503, 51.4946	5	Not Effective	Not Effective	Not Effective	Not Effective	0

Valid and Invalid Surfaces

Method: bishop simplified

Number of Valid Surfaces:	3696
Number of Invalid Surfaces:	8

Error Codes

Error Code -108 reported for 1 surface
 Error Code -112 reported for 7 surfaces

Method: janbu simplified

Number of Valid Surfaces:	3699
Number of Invalid Surfaces:	5

Error Codes

Error Code -111 reported for 5 surfaces

Error Code Descriptions

The following errors were encountered during the computation:

- 108 = Total driving moment or total driving force < 0.1. This is to limit the calculation of extremely high safety factors if the driving force is very small (0.1 is an arbitrary number).
- 111 = Safety factor equation did not converge
- 112 = The coefficient $M\text{-Alpha} = \cos(\alpha)(1 + \tan(\alpha)\tan(\phi)/F) < 0.2$ for the final iteration of the safety factor calculation. This screens out some slip surfaces which may not be valid in the context of the analysis, in particular, deep seated slip surfaces with many high negative base angle slices in the passive zone.

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.81249

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	0.370287	0.44077	-20.5833	AC alt	16	24.7913	9.17902	16.6369	4.98077	0	4.98077	1.53365	1.53365
2	0.370287	1.28038	-18.9922	AC alt	16	24.7913	9.6744	17.5348	7.11909	0	7.11909	3.7894	3.7894
3	0.370287	2.03729	-17.4162	AC alt	16	24.7913	10.1074	18.3196	8.98832	0	8.98832	5.81772	5.81772
4	0.370287	2.71374	-15.8536	AC alt	16	24.7913	10.4812	18.9971	10.6017	0	10.6017	7.62521	7.62521
5	0.370287	3.31167	-14.3031	AC alt	16	24.7913	10.7984	19.5719	11.9708	0	11.9708	9.21772	9.21772
6	0.370287	3.83278	-12.7632	AC alt	16	24.7913	11.0614	20.0486	13.106	0	13.106	10.6004	10.6004
7	0.370287	4.28421	-11.2326	AC alt	16	24.7913	11.276	20.4376	14.0324	0	14.0324	11.793	11.793
8	0.370287	6.23299	-9.71014	AC alt	16	24.7913	12.4682	22.5985	19.1789	0	19.1789	17.0454	17.0454
9	0.370287	9.34058	-8.19455	AC alt	16	24.7913	14.3971	26.0946	27.505	0	27.505	25.4317	25.4317
10	0.370287	12.3761	-6.68472	AC alt	16	24.7913	16.2534	29.4591	35.5178	0	35.5178	33.6129	33.6129
11	0.370287	15.3403	-5.17955	AC alt	16	24.7913	18.0392	32.6958	43.2261	0	43.2261	41.5909	41.5909
12	0.370287	18.2337	-3.67795	AC alt	16	24.7913	19.7564	35.8082	50.6386	0	50.6386	49.3686	49.3686
13	0.370287	21.0569	-2.17888	AC alt	16	24.7913	21.4066	38.7992	57.762	0	57.762	56.9476	56.9476
14	0.370287	23.8099	-0.681297	AC alt	16	24.7913	22.9912	41.6713	64.6021	0	64.6021	64.3287	64.3287
15	0.370287	26.4931	0.815817	AC alt	16	24.7913	24.5113	44.4265	71.1638	0	71.1638	71.5128	71.5128
16	0.370287	29.1064	2.31349	AC alt	16	24.7913	25.968	47.0667	77.4516	0	77.4516	78.5007	78.5007
17	0.370287	31.6496	3.81274	AC alt	16	24.7913	27.3619	49.5931	83.4681	0	83.4681	85.2916	85.2916
18	0.370287	34.1225	5.31462	AC alt	16	24.7913	28.6935	52.0067	89.2164	0	89.2164	91.8856	91.8856
19	0.370287	36.5246	6.82017	AC alt	16	24.7913	30.0197	68.9104	129.474	0	129.474	134.021	134.021
20	0.370287	38.8553	8.33047	AC alt	16	24.7913	31.1718	56.4985	99.9138	0	99.9138	104.478	104.478
21	0.370287	40.336	9.84663	AC alt	16	24.7913	31.8525	57.7323	102.852	0	102.852	108.381	108.381
22	0.370287	39.9118	11.3698	AC alt	16	24.7913	31.3876	56.8898	100.846	0	100.846	107.158	107.158
23	0.370287	39.3368	12.9011	AC alt	16	24.7913	30.8365	55.8908	98.4668	0	98.4668	105.53	105.53
24	0.370287	38.6863	14.4419	AC alt	16	24.7913	30.2446	54.818	95.9117	0	95.9117	103.701	103.701
25	0.370287	37.9588	15.9935	AC alt	16	24.7913	29.6116	53.6707	93.1794	0	93.1794	101.667	101.667
26	0.370287	37.2667	17.5572	AC alt	16	24.7913	29.003	52.5676	90.5523	0	90.5523	99.7287	99.7287
27	0.370287	37.7799	19.1345	AC alt	16	24.7913	29.0905	52.7263	90.9303	0	90.9303	101.023	101.023
28	0.370287	38.571	20.7271	AC alt	16	24.7913	29.3294	53.1592	91.9612	0	91.9612	103.06	103.06
29	0.370287	39.2767	22.3366	AC alt	16	24.7913	29.5095	53.4856	92.7385	0	92.7385	104.863	104.863
30	0.370287	39.894	23.9649	AC alt	16	24.7913	29.6294	53.703	93.2562	0	93.2562	106.426	106.426
31	0.370287	40.4197	25.6141	AC alt	16	24.7913	29.6876	53.8084	93.5074	0	93.5074	107.74	107.74
32	0.370287	40.85	27.2864	AC alt	16	24.7913	29.6821	53.7985	93.484	0	93.484	108.795	108.795
33	0.370287	41.1807	28.9843	AC alt	16	24.7913	29.6109	53.6694	93.1764	0	93.1764	109.579	109.579
34	0.370287	41.4069	30.7105	AC alt	16	24.7913	29.4714	53.4166	92.5742	0	92.5742	110.08	110.08
35	0.370287	41.5231	32.4683	AC alt	16	24.7913	29.2607	53.0347	91.6648	0	91.6648	110.283	110.283
36	0.370287	41.5222	34.2611	AC alt	16	24.7913	28.9752	52.5173	90.4326	0	90.4326	110.169	110.169
37	0.370287	40.683	36.0931	AC alt	16	24.7913	28.2345	51.1747	87.2351	0	87.2351	107.819	107.819
38	0.370287	39.0687	37.9688	AC alt	16	24.7913	27.0837	49.089	82.2678	0	82.2678	103.404	103.404
39	0.370287	37.3115	39.8939	AC alt	16	24.7913	25.8615	46.8737	76.9919	0	76.9919	98.6108	98.6108
40	0.370287	35.3992	41.8747	AC alt	16	24.7913	24.563	44.5202	71.3868	0	71.3868	93.4064	93.4064
41	0.370287	33.3171	43.9191	AC alt	16	24.7913	23.1827	42.0185	65.4289	0	65.4289	87.753	87.753
42	0.370287	31.112	46.0365	AC alt	16	24.7913	21.7463	39.4149	59.2281	0	59.2281	81.7757	81.7757
43	0.370287	28.8383	48.2386	AC alt	16	24.7913	20.2813	36.7597	52.9046	0	52.9046	75.6188	75.6188
44	0.370287	26.3316	50.5402	AC alt	16	24.7913	18.7093	33.9105	46.119	0	46.119	68.8477	68.8477
45	0.370287	23.5506	52.9606	AC alt	16	24.7913	17.0154	30.8403	38.8072	0	38.8072	61.3552	61.3552
46	0.370287	20.4466	55.5257	AC alt	16	24.7913	15.184	27.5208	30.9017	0	30.9017	53.0157	53.0157
47	0.370287	16.952	58.2715	AC alt	16	24.7913	13.1947	23.9154	22.3149	0	22.3149	43.6553	43.6553
48	0.370287	12.9675	61.2513	AC alt	16	24.7913	11.0207	19.9748	12.9304	0	12.9304	33.0195	33.0195
49	0.370287	8.37711	64.5496	AC alt	16	24.7913	8.64099	15.6617	2.65833	0	2.65833	20.815	20.815
50	0.370287	2.97463	68.3179	AC alt	16	24.7913	6.02555	10.9213	-8.6314	0	-8.6314	6.52393	6.52393

Global Minimum Query (janbu simplified) - Safety Factor: 1.69067

Slice Number	Width [m]	Weight [kN]	Angle of Slice Base [deg]	Base Material	Base Cohesion [kPa]	Base Friction Angle [deg]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]	Base Vertical Stress [kPa]	Effective Vertical Stress [kPa]
1	0.340777	0.483501	-25.3075	AC alt	16	24.7913	10.2841	17.387	6.76728	0	6.76728	1.90437	1.90437
2	0.340777	1.40801	-23.5247	AC alt	16	24.7913	10.9292	18.4776	9.36453	0	9.36453	4.60679	4.60679
3	0.340777	2.2492	-21.7658	AC alt	16	24.7913	11.4965	19.4368	11.6489	0	11.6489	7.05856	7.05856
4	0.340777	3.01024	-20.0283	AC alt	16	24.7913	11.9913	20.2733	13.6411	0	13.6411	9.26992	9.26992
5	0.340777	3.69386	-18.3097	AC alt	16	24.7913	12.4179	20.9946	15.359	0	15.359	11.2498	11.2498
6	0.340777	4.30246	-16.6081	AC alt	16	24.7913	12.7803	21.6072	16.818	0	16.818	13.006	13.006
7	0.340777	4.83913	-14.9214	AC alt	16	24.7913	13.0824	22.1181	18.0346	0	18.0346	14.5484	14.5484
8	0.340777	6.56181	-13.2479	AC alt	16	24.7913	14.3056	24.1861	22.9597	0	22.9597	19.5917	19.5917
9	0.340777	9.33573	-11.5858	AC alt	16	24.7913	16.3213	27.5939	31.0755	0	31.0755	27.7295	27.7295
10	0.340777	12.0414	-9.93359	AC alt	16	24.7913	18.2523	30.8586	38.8509	0	38.8509	35.6543	35.6543
11	0.340777	14.6799	-8.28965	AC alt	16	24.7913	20.1021	33.986	46.2989	0	46.2989	43.37	43.37
12	0.340777	17.2521	-6.65257	AC alt	16	24.7913	21.8736	36.981	53.4316	0	53.4316	50.8804	50.8804
13	0.340777	19.7589	-5.02092	AC alt	16	24.7913	23.5692	39.8478	60.2593	0	60.2593	58.1886	58.1886
14	0.340777	22.2007	-3.39335	AC alt	16	24.7913	25.1913	42.5901	66.79	0	66.79	65.2963	65.2963
15	0.340777	24.578	-1.76852	AC alt	16	24.7913	26.7414	45.2108	73.0316	0	73.0316	72.206	72.206
16	0.340777	26.8911	-0.145118	AC alt	16	24.7913	28.2211	47.7125	78.9897	0	78.9897	78.9182	78.9182
17	0.340777	29.14	1.47817	AC alt	16	24.7913	29.6317	50.0974	84.6693	0	84.6693	85.434	85.434
18	0.340777	31.3246	3.10265	AC alt	16	24.7913	30.9741	52.3669	90.0744	0	90.0744	91.7534	91.7534
19	0.340777	33.4448	4.72963	AC alt	16	24.7913	32.2249	54.5225	95.208	0	95.208	97.8762	97.8762
20	0.340777	35.5001	6.36045	AC alt	16	24.7913	33.457	56.5648	100.072	0	100.072	103.801	103.801
21	0.340777	37.49	7.99646	AC alt	16	24.7913	41.8631	70.7767	133.918	0	133.918	139.799	139.799
22	0.340777	39.0379	9.63906	AC alt	16	24.7913	35.4113	59.8688	107.941	0	107.941	113.955	113.955
23	0.340777	38.8251	11.2897	AC alt	16	24.7913	34.991	59.1582	106.248	0	106.248	113.233	113.233
24	0.340777	38.3387	12.9499	AC alt	16	24.7913	34.3848	58.1334	103.808	0	103.808	111.714	111.714
25	0.340777	37.783	14.6213	AC alt	16	24.7913	33.7356	57.0357	101.193	0	101.193	109.994	109.994
26	0.340777	37.1564	16.3055	AC alt	16	24.7913	33.0426	55.8642	98.4032	0	98.4032	108.069	108.069
27	0.340777	36.4572	18.0043	AC alt	16	24.7913	32.3054	54.6177	95.4348	0	95.4348	105.934	105.934
28	0.340777	36.055	19.7196	AC alt	16	24.7913	31.7697	53.712	93.2776	0	93.2776	104.665	104.665
29	0.340777	36.6311	21.4536	AC alt	16	24.7913	31.8781	53.8954	93.7147	0	93.7147	106.242	106.242
30	0.340777	37.192	23.2085	AC alt	16	24.7913	31.965	54.0423	94.0643	0	94.0643	107.77	107.77
31	0.340777	37.6703	24.9868	AC alt	16	24.7913	31.9857	54.0772	94.1476	0	94.1476	109.054	109.054
32	0.340777	38.0622	26.7912	AC alt	16	24.7913	31.9379	53.9965	93.9553	0	93.9553	110.082	110.082
33	0.340777	38.3639	28.6248	AC alt	16	24.7913	31.8192	53.7958	93.4772	0	93.4772	110.843	110.843
34	0.340777	38.5706	30.4911	AC alt	16	24.7913	31.6266	53.4701	92.7017	0	92.7017	111.325	111.325
35	0.340777	38.6769	32.3939	AC alt	16	24.7913	31.3566	53.0136	91.6146	0	91.6146	111.509	111.509
36	0.340777	38.6764	34.3378	AC alt	16	24.7913	31.0051	52.4194	90.1993	0	90.1993	111.38	111.38
37	0.340777	38.5617	36.3279	AC alt	16	24.7913	30.5673	51.6793	88.4366	0	88.4366	110.914	110.914
38	0.340777	38.324	38.3703	AC alt	16	24.7913	30.0376	50.7836	86.3038	0	86.3038	110.086	110.086
39	0.340777	37.8212	40.4722	AC alt	16	24.7913	29.3313	49.5895	83.4596	0	83.4596	108.486	108.486
40	0.340777	36.3106	42.6422	AC alt	16	24.7913	28.0184	47.3699	78.1737	0	78.1737	103.976	103.976
41	0.340777	34.4818	44.8909	AC alt	16	24.7913	26.5177	44.8327	72.1311	0	72.1311	98.548	98.548
42	0.340777	32.4717	47.2316	AC alt	16	24.7913	24.912	42.1179	65.6655	0	65.6655	92.5977	92.5977
43	0.340777	30.2552	49.6809	AC alt	16	24.7913	23.1892	39.2053	58.7292	0	58.7292	86.0545	86.0545
44	0.340777	27.7999	52.2611	AC alt	16	24.7913	21.3344	36.0695	51.2609	0	51.2609	78.8257	78.8257
45	0.340777	25.1162	55.002	AC alt	16	24.7913	19.3564	32.7253	43.2963	0	43.2963	70.9422	70.9422
46	0.340777	22.207	57.9462	AC alt	16	24.7913	17.259	29.1792	34.8512	0	34.8512	62.4137	62.4137
47	0.340777	18.8633	61.1579	AC alt	16	24.7913	14.9404	25.2593	25.5157	0	25.5157	52.6449	52.6449
48	0.340777	14.9279	64.7425	AC alt	16	24.7913	12.3389	20.861	15.0407	0	15.0407	41.194	41.194
49	0.340777	10.1143	68.8993	AC alt	16	24.7913	9.35353	15.8137	3.02041	0	3.02041	27.2597	27.2597
50	0.340777	3.72015	74.1211	AC alt	16	24.7913	5.772	9.75855	-11.4005	0	-11.4005	8.89066	8.89066

Interslice Data

Global Minimum Query (bishop simplified) - Safety Factor: 1.81249

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	111.507	47.1633	0	0	0
2	111.877	47.0242	4.09024	0	0
3	112.247	46.8968	8.57851	0	0
4	112.618	46.7806	13.3638	0	0
5	112.988	46.6755	18.3583	0	0
6	113.358	46.5811	23.4854	0	0
7	113.729	46.4972	28.6791	0	0
8	114.099	46.4237	33.8848	0	0
9	114.469	46.3603	39.7151	0	0
10	114.839	46.307	46.5109	0	0
11	115.21	46.2636	54.0685	0	0
12	115.58	46.23	62.1966	0	0
13	115.95	46.2062	70.7148	0	0
14	116.321	46.1921	79.4522	0	0
15	116.691	46.1877	88.2469	0	0
16	117.061	46.193	96.9445	0	0
17	117.431	46.2079	105.398	0	0
18	117.802	46.2326	113.466	0	0
19	118.172	46.2671	121.014	0	0
20	118.542	46.3114	145.583	0	0
21	118.913	46.3656	151.704	0	0
22	119.283	46.4298	156.884	0	0
23	119.653	46.5043	160.993	0	0
24	120.023	46.5891	164.056	0	0
25	120.394	46.6845	166.105	0	0
26	120.764	46.7906	167.176	0	0
27	121.134	46.9078	167.303	0	0
28	121.505	47.0362	166.388	0	0
29	121.875	47.1764	164.359	0	0
30	122.245	47.3285	161.173	0	0
31	122.615	47.4931	156.791	0	0
32	122.986	47.6706	151.18	0	0
33	123.356	47.8616	144.311	0	0
34	123.726	48.0668	136.159	0	0
35	124.097	48.2867	126.706	0	0
36	124.467	48.5223	115.939	0	0
37	124.837	48.7745	103.855	0	0
38	125.207	49.0445	90.7573	0	0
39	125.578	49.3335	77.009	0	0
40	125.948	49.643	62.7496	0	0
41	126.318	49.9749	48.1451	0	0
42	126.689	50.3315	33.3961	0	0
43	127.059	50.7155	18.7059	0	0
44	127.429	51.1302	4.27324	0	0
45	127.8	51.58	-9.5475	0	0
46	128.17	52.0707	-22.2914	0	0
47	128.54	52.61	-33.3359	0	0
48	128.91	53.2089	-41.8158	0	0
49	129.281	53.8838	-46.4643	0	0
50	129.651	54.6619	-45.3341	0	0
51	130.021	55.5932	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.69067

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [deg]
1	111.7	47.1544	0	0	0
2	112.041	46.9933	4.59458	0	0
3	112.381	46.845	9.7077	0	0
4	112.722	46.7089	15.2099	0	0
5	113.063	46.5847	20.9902	0	0
6	113.404	46.4719	26.9534	0	0
7	113.745	46.3703	33.0174	0	0
8	114.085	46.2794	39.1127	0	0
9	114.426	46.1992	45.8291	0	0
10	114.767	46.1294	53.5614	0	0
11	115.108	46.0697	62.0991	0	0
12	115.448	46.02	71.2473	0	0
13	115.789	45.9803	80.824	0	0
14	116.13	45.9503	90.6589	0	0
15	116.471	45.9301	100.592	0	0
16	116.812	45.9196	110.472	0	0
17	117.152	45.9187	120.156	0	0
18	117.493	45.9275	129.508	0	0
19	117.834	45.946	138.398	0	0
20	118.175	45.9742	146.702	0	0
21	118.515	46.0122	154.3	0	0
22	118.856	46.0601	174.81	0	0
23	119.197	46.1179	180.629	0	0
24	119.538	46.186	185.323	0	0
25	119.879	46.2643	188.905	0	0
26	120.219	46.3532	191.403	0	0
27	120.56	46.4529	192.853	0	0
28	120.901	46.5637	193.29	0	0
29	121.242	46.6858	192.722	0	0
30	121.582	46.8197	191.033	0	0
31	121.923	46.9659	188.18	0	0
32	122.264	47.1247	184.127	0	0
33	122.605	47.2967	178.842	0	0
34	122.946	47.4827	172.298	0	0
35	123.286	47.6834	164.473	0	0
36	123.627	47.8996	155.349	0	0
37	123.968	48.1324	144.915	0	0
38	124.309	48.383	133.17	0	0
39	124.649	48.6528	120.119	0	0
40	124.99	48.9436	105.846	0	0
41	125.331	49.2574	90.86	0	0
42	125.672	49.5969	75.4081	0	0
43	126.013	49.9653	59.7043	0	0
44	126.353	50.3668	44.0224	0	0
45	126.694	50.8071	28.7217	0	0
46	127.035	51.2938	14.244	0	0
47	127.376	51.8381	1.15788	0	0
48	127.716	52.4569	-9.54041	0	0
49	128.057	53.1792	-16.2002	0	0
50	128.398	54.0623	-15.6805	0	0
51	128.739	55.2603	0	0	0

Discharge Sections

Entity Information

◆ Group 1

Shared Entities

Type	Coordinates (x,y)
	80.7007, 55.2418
	80.4259, 55.2446
	78.4198, 55.5911
	77.7056, 55.6215
	75, 55.7387
	69.3784, 56
	68.5219, 56
	62.8617, 57.2942
	59.2648, 58
	58.579, 58.1125
	53.9303, 58.9269
	49.2742, 59.7583
	47.9853, 60
	45.4516, 60.5635
	39.5932, 61.8512
	36.8861, 62.4679
	32.2882, 63.5002
	30, 63.9926
	29.6802, 64.0685
	29.5466, 64.0882
	26.2905, 64.7615
	25, 65.0209
	20.3275, 65.9782
	18.4362, 66.4057
	18.1143, 66.4366
	17.3143, 66.6093
	13.2792, 67.2667
	9.51379, 68
	5.53814, 68.7211
	0, 69.7719
	0, 48.7719
	0, 48.5949
	0, 0
	184.033, 0
	184.033, 24.404
	184.033, 31.6434
	184.033, 52.6434
	183.47, 52.8208
	181.22, 53.6265
	180.825, 53.7532
	180.115, 54
	179.207, 54.1746
	178.462, 54.2947
	178.299, 54.331

External Boundary	176.831, 54.5814
	176.401, 54.6744
	175.242, 54.8892
	173.738, 55.1973
	172.761, 55.3515
	171.606, 55.587
	171.008, 55.69
	170.026, 55.8821
	169.472, 56
	168.732, 56.0947
	165.967, 56.4021
	164.424, 56.5467
	162.573, 56.7591
	161.512, 56.8552
	161.173, 56.9013
	160.322, 56.9728
	159.398, 57.0948
	158.254, 57.1868
	156.498, 57.4122
	156.087, 57.4428
	154.467, 57.6287
	153.464, 57.7282
	153.161, 57.7339
	152.271, 57.8184
	151.106, 57.8775
	150.352, 57.8994
	149.636, 57.9309
	148.638, 57.9998
	144.294, 58
	142.282, 57.937
	140.117, 57.9161
	137.146, 57.7569
	136.752, 57.7096
	136.574, 57.6696
	136.316, 57.5966
	135.402, 57.5006
	134.748, 57.27
	133.928, 57.0853
	133.512, 56.9336
	133.388, 56.9015
	132.999, 56.6218
	131.867, 56.1477
	131.185, 55.9363
	130.56, 55.7496
	129.387, 55.4092
	126.769, 54.8074
	124.827, 54.5144
	121.001, 51.9946
	119.001, 51.9946
	114.075, 47.0456
	99.0896, 47.7324
	96.2495, 47.4714
	80.6803, 48.758
	80.7007, 55.2416
	0, 48.7719
	5.53814, 47.7211
	9.51379, 47
	13.2792, 46.2667
	17.3143, 45.6093



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62.8617, 36.2942
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77.7056, 34.6215
78.4198, 34.5911
80.4259, 34.2446
81.1279, 34.2376
82.7023, 34.2573
90.2703, 34.077
91.2087, 34.062
100.335, 33.7173
101.761, 33.3725
102.645, 33.2768
103.569, 33.2121
104.617, 33.1715
106.081, 33.3299
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106.775, 33.3309
106.904, 33.3459
107.477, 33.3506
107.952, 33.4031
108.831, 33.4454
110.732, 33.612
112.312, 33.7601
115.18, 33.8483
115.623, 33.8852
116.011, 33.8708
116.384, 33.8994
116.777, 33.8889
118.214, 34.0152
119.411, 34.0046
120, 34.058
120.681, 34.0362
121.081, 34.0028
121.452, 34.052
121.902, 34.0013
122.481, 34.0811
122.636, 34.0649
122.804, 34.0601
123.335, 34.1178

Material Boundary

123.662, 34.1152
124.672, 34.1802
125.169, 34.1948
125.947, 34.2379
126.405, 34.2901
127.096, 34.3498
128.158, 34.4881
129.026, 34.6315
130.275, 34.8792
130.765, 35
131.584, 35.2869
132.086, 35.476
132.61, 35.6218
133.388, 35.9015
133.512, 35.9336
133.928, 36.0853
134.748, 36.27
135.402, 36.5006
136.316, 36.5966
136.574, 36.6696
136.752, 36.7096
137.146, 36.7569
140.117, 36.9161
142.282, 36.937
144.294, 37
148.638, 36.9998
149.636, 36.9309
150.352, 36.8994
151.106, 36.8775
152.271, 36.8184
153.161, 36.7339
153.464, 36.7282
154.467, 36.6287
156.087, 36.4428
156.498, 36.4122
158.254, 36.1868
159.398, 36.0948
160.322, 35.9728
161.173, 35.9013
161.512, 35.8552
162.573, 35.7591
164.424, 35.5467
165.967, 35.4021
168.732, 35.0947
169.472, 35
170.026, 34.8821
171.008, 34.69
171.606, 34.587
172.761, 34.3515
173.738, 34.1973
175.242, 33.8892
176.401, 33.6744
176.831, 33.5814
178.299, 33.331
178.462, 33.2947
179.207, 33.1746
180.115, 33
180.825, 32.7532
181.22, 32.6265

	183.47, 31.8208 184.033, 31.6434
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Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario
Water Table	0, 48.5949 32.8298, 43.1506 43.6842, 41.9077 57.4431, 39.6825 71.6924, 36.5942 88.5962, 34.1525 100, 32.62 109.428, 31.9443 130, 30.5078 138.943, 30.3173 154.188, 29.5555 164.479, 28.7937 170.387, 27.651 184.033, 24.404	Assigned to:  AC  AC alt
Distributed Load	111.441, 47.1663 99.0896, 47.7324 96.2495, 47.4714 83.1575, 48.5533	Constant DistributionOrientation: Normal to boundaryMagnitude: 20 kN/m2Creates Excess Pore Pressure: No



Report di Calcolo

Nome Progetto: New Project

Autore: Ingegnere

Jobname: \\192.168.1.10\Server\CLL Dropbox\ARCH\S_2023\23-S043 CoopArezzo E78\Min\S\ParatiePlus\frana
4.pplus

Data: 29/01/2024 08:38:36

Design Section: Base Design Section

Sommario

Contenuto Sommario

1. Descrizione del Software

ParatiePlus analizza il comportamento meccanico di una struttura di sostegno flessibile di uno scavo in terreno o roccia, ponendo l'accento sull'aspetto dell'interazione "locale" fra parete e terreno.

ParatiePlus non permette lo studio di problematiche che coinvolgano un movimento esteso del versante di scavo, in quanto ParatiePlus non consente lo sviluppo di movimenti rigidi della parete o parti di ammasso rispetto ad altre parti di terreno.

Scopo precipuo di ParatiePlus è quindi il calcolo delle azioni flettenti e taglianti e delle deformazioni laterali della parete di sostegno, e la valutazione di tutte quelle grandezze a queste connesse.

Lo studio di una parete flessibile è condotto attraverso una simulazione numerica del reale: il programma stabilisce e risolve un sistema di equazioni algebriche la cui soluzione permette di riprodurre abbastanza realisticamente l'effettivo comportamento dell'opera di sostegno.

La simulazione numerica è quella offerta dal metodo degli elementi finiti.

La schematizzazione in elementi finiti avviene in questo modo:

- si analizza un problema piano (nel piano Y-Z): i gradi di libertà nodali attivi sono lo spostamento laterale e la rotazione fuori piano: gli spostamenti verticali sono automaticamente vincolati (di conseguenza le azioni assiali nelle pareti verticali non sono calcolate);
- la parete flessibile di sostegno vera e propria è schematizzata da una serie di elementi finiti BEAM verticali;
- il terreno, che spinge contro la parete (da monte e da valle) e che reagisce in modo complesso alle deformazioni della parete, è simulato attraverso un doppio letto di molle elasto-plastiche connesse agli stessi nodi della parete;
- i tiranti, i puntoni, le solette, gli appoggi cedevoli o fissi, sono schematizzati tramite molle puntuali convergenti in alcuni punti (nodi) della parete ove convergono parimenti elementi BEAM ed elementi terreno.

2. Descrizione della Stratigrafia e degli Strati di Terreno

Tipo : HORIZONTAL

Quota : 0 m

OCR : 1

Tipo : HORIZONTAL

Quota : -1 m

OCR : 1

Tipo : HORIZONTAL

Quota : -7 m

OCR : 1

3. Descrizione Pareti

X : 0 m

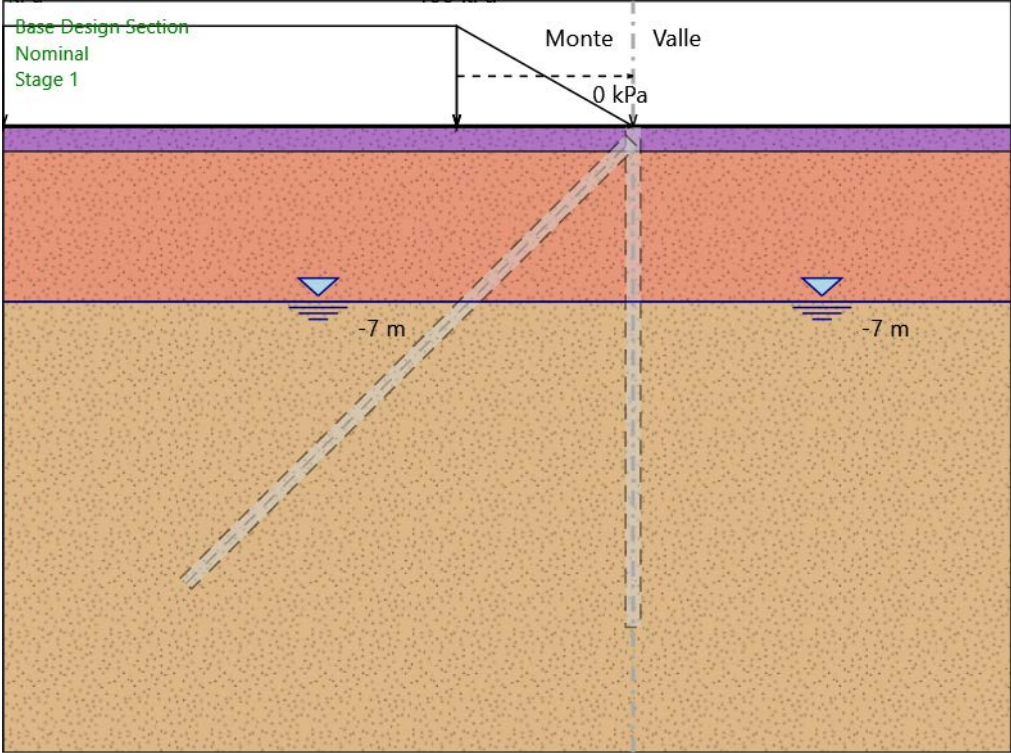
Quota in alto : 0 m

Quota di fondo : -20 m

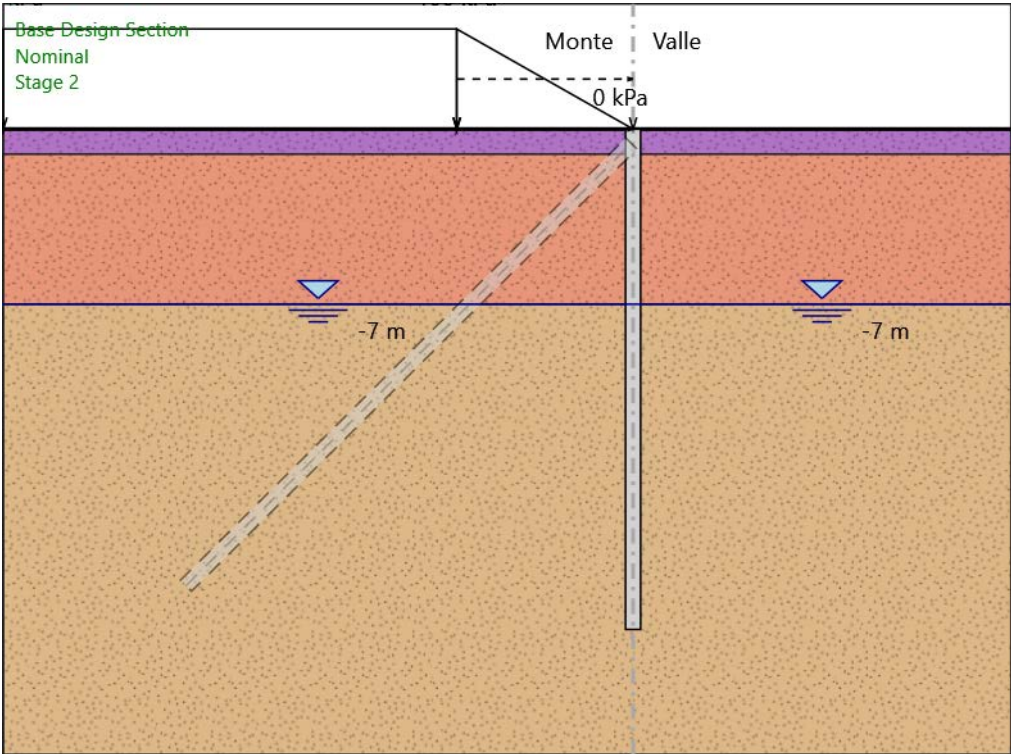
Muro di sinistra

4. Fasi di Calcolo

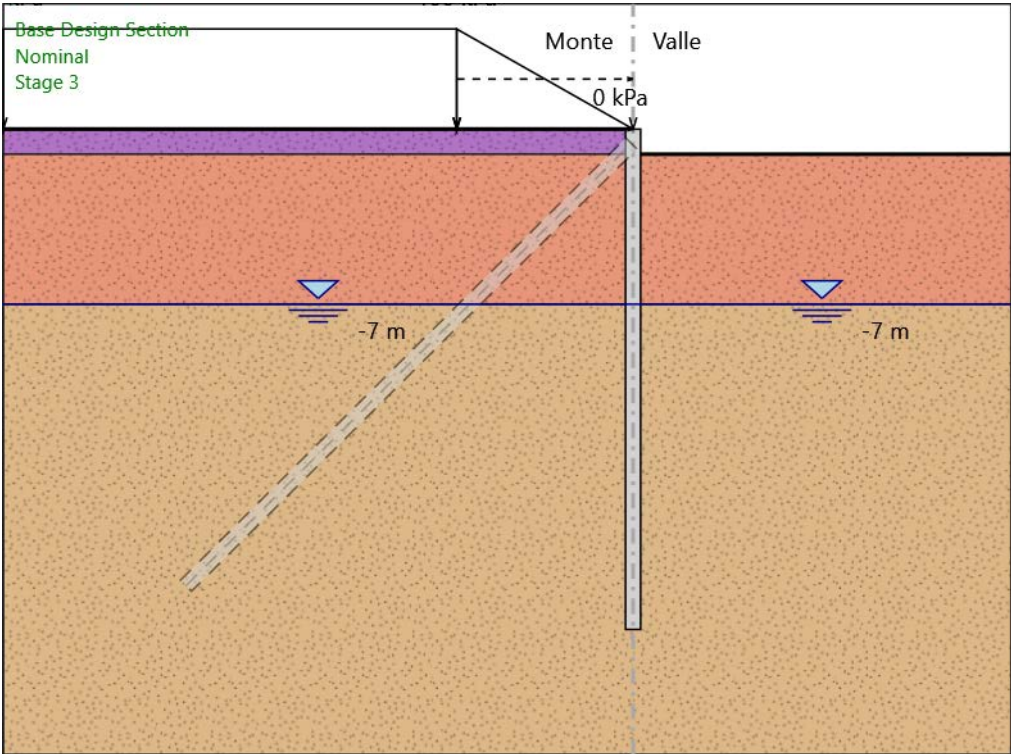
4.1. Stage 1



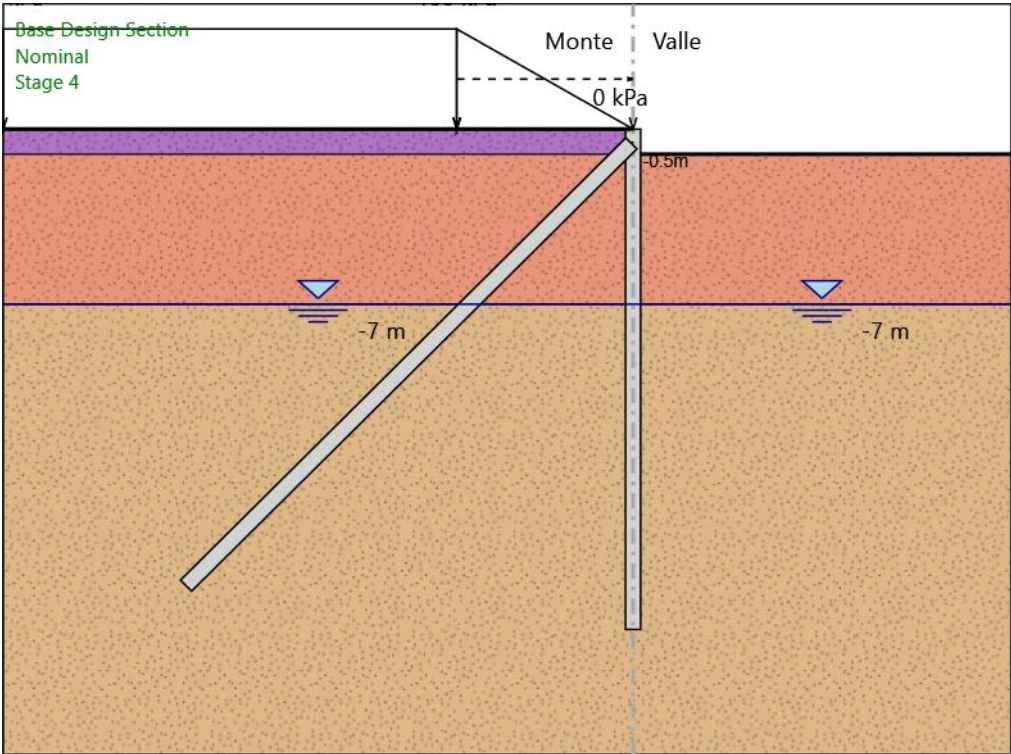
4.2. Stage 2



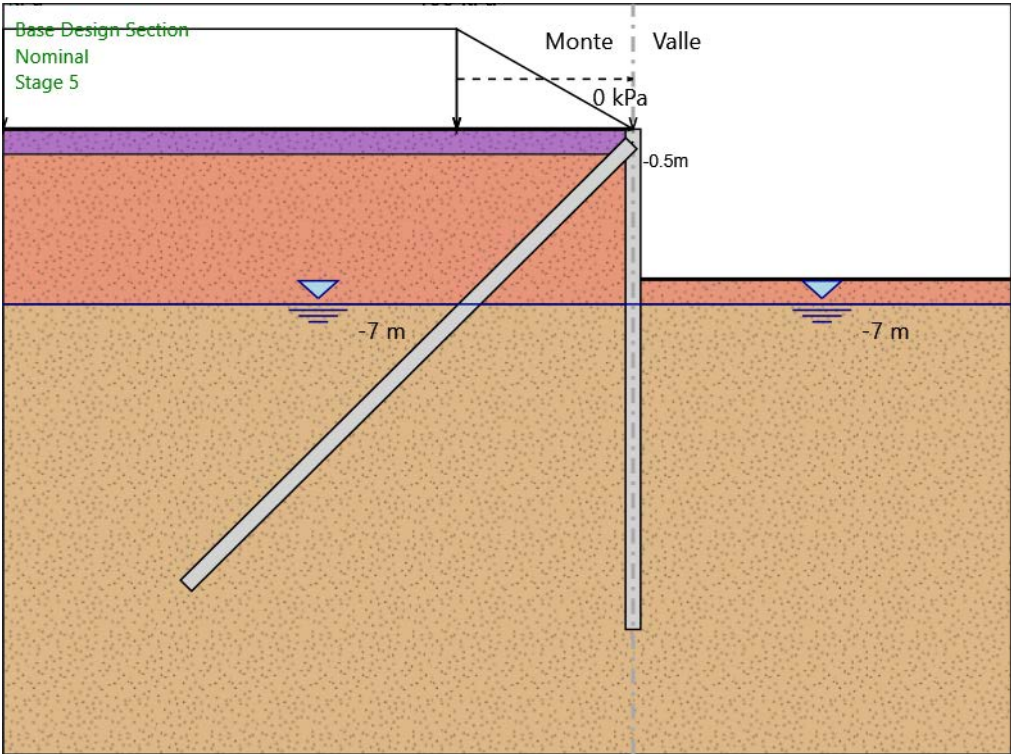
4.3. Stage 3



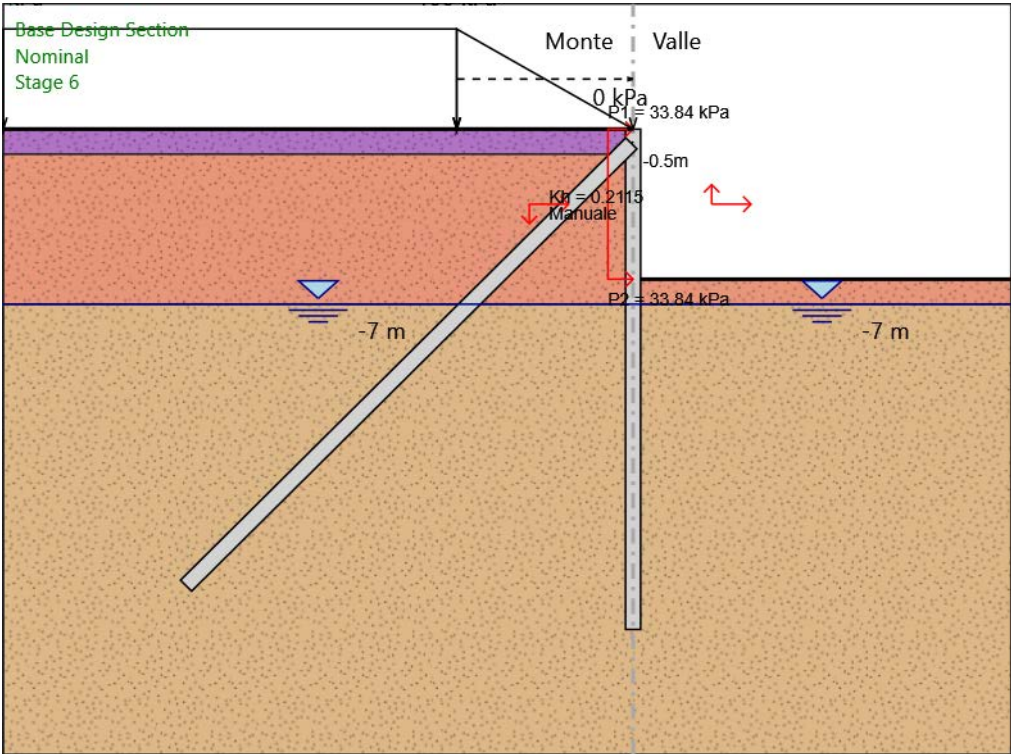
4.4. Stage 4



4.5. Stage 5



4.6. Stage 6



5. Grafici dei Risultati

5.1. Design Assumption : Nominal

5.1.1. Tabella Spostamento Nominal - LEFT Stage: Stage 1

Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 1	0	0
Stage 1	-0.2	0
Stage 1	-0.4	0
Stage 1	-0.5	0
Stage 1	-0.7	0
Stage 1	-0.9	0
Stage 1	-1.1	0
Stage 1	-1.3	0
Stage 1	-1.5	0
Stage 1	-1.7	0
Stage 1	-1.9	0
Stage 1	-2.1	0
Stage 1	-2.3	0
Stage 1	-2.5	0
Stage 1	-2.7	0
Stage 1	-2.9	0
Stage 1	-3.1	0
Stage 1	-3.3	0
Stage 1	-3.5	0
Stage 1	-3.7	0
Stage 1	-3.9	0
Stage 1	-4.1	0
Stage 1	-4.3	0
Stage 1	-4.5	0
Stage 1	-4.7	0
Stage 1	-4.9	0
Stage 1	-5.1	0
Stage 1	-5.3	0
Stage 1	-5.5	0
Stage 1	-5.7	0
Stage 1	-5.9	0
Stage 1	-6.1	0
Stage 1	-6.3	0
Stage 1	-6.5	0
Stage 1	-6.7	0
Stage 1	-6.9	0
Stage 1	-7.1	0
Stage 1	-7.3	0
Stage 1	-7.5	0
Stage 1	-7.7	0
Stage 1	-7.9	0
Stage 1	-8.1	0
Stage 1	-8.3	0
Stage 1	-8.5	0
Stage 1	-8.7	0
Stage 1	-8.9	0
Stage 1	-9.1	0
Stage 1	-9.3	0
Stage 1	-9.5	0
Stage 1	-9.7	0
Stage 1	-9.9	0
Stage 1	-10.1	0
Stage 1	-10.3	0
Stage 1	-10.5	0
Stage 1	-10.7	0
Stage 1	-10.9	0
Stage 1	-11.1	0
Stage 1	-11.3	0
Stage 1	-11.5	0
Stage 1	-11.7	0
Stage 1	-11.9	0

Design Assumption: NominalTipo Risultato: Spostamento		Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 1	-12.1	0
Stage 1	-12.3	0
Stage 1	-12.5	0
Stage 1	-12.7	0
Stage 1	-12.9	0
Stage 1	-13.1	0
Stage 1	-13.3	0
Stage 1	-13.5	0
Stage 1	-13.7	0
Stage 1	-13.9	0
Stage 1	-14.1	0
Stage 1	-14.3	0
Stage 1	-14.5	0
Stage 1	-14.7	0
Stage 1	-14.9	0
Stage 1	-15.1	0
Stage 1	-15.3	0
Stage 1	-15.5	0
Stage 1	-15.7	0
Stage 1	-15.9	0
Stage 1	-16.1	0
Stage 1	-16.3	0
Stage 1	-16.5	0
Stage 1	-16.7	0
Stage 1	-16.9	0
Stage 1	-17.1	0
Stage 1	-17.3	0
Stage 1	-17.5	0
Stage 1	-17.7	0
Stage 1	-17.9	0
Stage 1	-18.1	0
Stage 1	-18.3	0
Stage 1	-18.5	0
Stage 1	-18.7	0
Stage 1	-18.9	0
Stage 1	-19.1	0
Stage 1	-19.3	0
Stage 1	-19.5	0
Stage 1	-19.7	0
Stage 1	-19.9	0
Stage 1	-20	0

5.1.2. Tabella Spostamento Nominal - LEFT Stage: Stage 2

Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 2	0	0
Stage 2	-0.2	0
Stage 2	-0.4	0
Stage 2	-0.5	0
Stage 2	-0.7	0
Stage 2	-0.9	0
Stage 2	-1.1	0
Stage 2	-1.3	0
Stage 2	-1.5	0
Stage 2	-1.7	0
Stage 2	-1.9	0
Stage 2	-2.1	0
Stage 2	-2.3	0
Stage 2	-2.5	0
Stage 2	-2.7	0
Stage 2	-2.9	0
Stage 2	-3.1	0
Stage 2	-3.3	0
Stage 2	-3.5	0
Stage 2	-3.7	0
Stage 2	-3.9	0
Stage 2	-4.1	0
Stage 2	-4.3	0
Stage 2	-4.5	0
Stage 2	-4.7	0
Stage 2	-4.9	0
Stage 2	-5.1	0
Stage 2	-5.3	0
Stage 2	-5.5	0
Stage 2	-5.7	0
Stage 2	-5.9	0
Stage 2	-6.1	0
Stage 2	-6.3	0
Stage 2	-6.5	0
Stage 2	-6.7	0
Stage 2	-6.9	0
Stage 2	-7.1	0
Stage 2	-7.3	0
Stage 2	-7.5	0
Stage 2	-7.7	0
Stage 2	-7.9	0
Stage 2	-8.1	0
Stage 2	-8.3	0
Stage 2	-8.5	0
Stage 2	-8.7	0
Stage 2	-8.9	0
Stage 2	-9.1	0
Stage 2	-9.3	0
Stage 2	-9.5	0
Stage 2	-9.7	0
Stage 2	-9.9	0
Stage 2	-10.1	0
Stage 2	-10.3	0
Stage 2	-10.5	0
Stage 2	-10.7	0
Stage 2	-10.9	0
Stage 2	-11.1	0
Stage 2	-11.3	0
Stage 2	-11.5	0
Stage 2	-11.7	0
Stage 2	-11.9	0
Stage 2	-12.1	0
Stage 2	-12.3	0
Stage 2	-12.5	0
Stage 2	-12.7	0
Stage 2	-12.9	0
Stage 2	-13.1	0

Design Assumption: NominalTipo Risultato: Spostamento		Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 2	-13.3	0
Stage 2	-13.5	0
Stage 2	-13.7	0
Stage 2	-13.9	0
Stage 2	-14.1	0
Stage 2	-14.3	0
Stage 2	-14.5	0
Stage 2	-14.7	0
Stage 2	-14.9	0
Stage 2	-15.1	0
Stage 2	-15.3	0
Stage 2	-15.5	0
Stage 2	-15.7	0
Stage 2	-15.9	0
Stage 2	-16.1	0
Stage 2	-16.3	0
Stage 2	-16.5	0
Stage 2	-16.7	0
Stage 2	-16.9	0
Stage 2	-17.1	0
Stage 2	-17.3	0
Stage 2	-17.5	0
Stage 2	-17.7	0
Stage 2	-17.9	0
Stage 2	-18.1	0
Stage 2	-18.3	0
Stage 2	-18.5	0
Stage 2	-18.7	0
Stage 2	-18.9	0
Stage 2	-19.1	0
Stage 2	-19.3	0
Stage 2	-19.5	0
Stage 2	-19.7	0
Stage 2	-19.9	0
Stage 2	-20	0

5.1.3. Tabella Spostamento Nominal - LEFT Stage: Stage 3

Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 3	0	1.81
Stage 3	-0.2	1.73
Stage 3	-0.4	1.65
Stage 3	-0.5	1.62
Stage 3	-0.7	1.54
Stage 3	-0.9	1.46
Stage 3	-1.1	1.38
Stage 3	-1.3	1.31
Stage 3	-1.5	1.23
Stage 3	-1.7	1.16
Stage 3	-1.9	1.09
Stage 3	-2.1	1.01
Stage 3	-2.3	0.95
Stage 3	-2.5	0.88
Stage 3	-2.7	0.82
Stage 3	-2.9	0.76
Stage 3	-3.1	0.71
Stage 3	-3.3	0.65
Stage 3	-3.5	0.6
Stage 3	-3.7	0.56
Stage 3	-3.9	0.52
Stage 3	-4.1	0.48
Stage 3	-4.3	0.44
Stage 3	-4.5	0.41
Stage 3	-4.7	0.37
Stage 3	-4.9	0.35
Stage 3	-5.1	0.32
Stage 3	-5.3	0.29
Stage 3	-5.5	0.27
Stage 3	-5.7	0.25
Stage 3	-5.9	0.23
Stage 3	-6.1	0.21
Stage 3	-6.3	0.2
Stage 3	-6.5	0.18
Stage 3	-6.7	0.17
Stage 3	-6.9	0.15
Stage 3	-7.1	0.14
Stage 3	-7.3	0.13
Stage 3	-7.5	0.12
Stage 3	-7.7	0.11
Stage 3	-7.9	0.1
Stage 3	-8.1	0.1
Stage 3	-8.3	0.09
Stage 3	-8.5	0.09
Stage 3	-8.7	0.09
Stage 3	-8.9	0.08
Stage 3	-9.1	0.08
Stage 3	-9.3	0.08
Stage 3	-9.5	0.08
Stage 3	-9.7	0.08
Stage 3	-9.9	0.08
Stage 3	-10.1	0.08
Stage 3	-10.3	0.08
Stage 3	-10.5	0.08
Stage 3	-10.7	0.08
Stage 3	-10.9	0.08
Stage 3	-11.1	0.08
Stage 3	-11.3	0.08
Stage 3	-11.5	0.08
Stage 3	-11.7	0.08
Stage 3	-11.9	0.08
Stage 3	-12.1	0.08
Stage 3	-12.3	0.08
Stage 3	-12.5	0.08
Stage 3	-12.7	0.08
Stage 3	-12.9	0.08
Stage 3	-13.1	0.08

Design Assumption: NominalTipo Risultato: Spostamento		Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 3	-13.3	0.08
Stage 3	-13.5	0.08
Stage 3	-13.7	0.09
Stage 3	-13.9	0.09
Stage 3	-14.1	0.09
Stage 3	-14.3	0.09
Stage 3	-14.5	0.09
Stage 3	-14.7	0.09
Stage 3	-14.9	0.09
Stage 3	-15.1	0.09
Stage 3	-15.3	0.09
Stage 3	-15.5	0.09
Stage 3	-15.7	0.09
Stage 3	-15.9	0.09
Stage 3	-16.1	0.09
Stage 3	-16.3	0.09
Stage 3	-16.5	0.09
Stage 3	-16.7	0.09
Stage 3	-16.9	0.09
Stage 3	-17.1	0.09
Stage 3	-17.3	0.09
Stage 3	-17.5	0.09
Stage 3	-17.7	0.09
Stage 3	-17.9	0.09
Stage 3	-18.1	0.09
Stage 3	-18.3	0.09
Stage 3	-18.5	0.09
Stage 3	-18.7	0.09
Stage 3	-18.9	0.09
Stage 3	-19.1	0.09
Stage 3	-19.3	0.09
Stage 3	-19.5	0.09
Stage 3	-19.7	0.09
Stage 3	-19.9	0.09
Stage 3	-20	0.09

5.1.4. Tabella Spostamento Nominal - LEFT Stage: Stage 4

Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 4	0	1.81
Stage 4	-0.2	1.73
Stage 4	-0.4	1.65
Stage 4	-0.5	1.62
Stage 4	-0.7	1.54
Stage 4	-0.9	1.46
Stage 4	-1.1	1.38
Stage 4	-1.3	1.31
Stage 4	-1.5	1.23
Stage 4	-1.7	1.16
Stage 4	-1.9	1.09
Stage 4	-2.1	1.01
Stage 4	-2.3	0.95
Stage 4	-2.5	0.88
Stage 4	-2.7	0.82
Stage 4	-2.9	0.76
Stage 4	-3.1	0.71
Stage 4	-3.3	0.65
Stage 4	-3.5	0.6
Stage 4	-3.7	0.56
Stage 4	-3.9	0.52
Stage 4	-4.1	0.48
Stage 4	-4.3	0.44
Stage 4	-4.5	0.41
Stage 4	-4.7	0.37
Stage 4	-4.9	0.35
Stage 4	-5.1	0.32
Stage 4	-5.3	0.29
Stage 4	-5.5	0.27
Stage 4	-5.7	0.25
Stage 4	-5.9	0.23
Stage 4	-6.1	0.21
Stage 4	-6.3	0.2
Stage 4	-6.5	0.18
Stage 4	-6.7	0.17
Stage 4	-6.9	0.15
Stage 4	-7.1	0.14
Stage 4	-7.3	0.13
Stage 4	-7.5	0.12
Stage 4	-7.7	0.11
Stage 4	-7.9	0.1
Stage 4	-8.1	0.1
Stage 4	-8.3	0.09
Stage 4	-8.5	0.09
Stage 4	-8.7	0.09
Stage 4	-8.9	0.08
Stage 4	-9.1	0.08
Stage 4	-9.3	0.08
Stage 4	-9.5	0.08
Stage 4	-9.7	0.08
Stage 4	-9.9	0.08
Stage 4	-10.1	0.08
Stage 4	-10.3	0.08
Stage 4	-10.5	0.08
Stage 4	-10.7	0.08
Stage 4	-10.9	0.08
Stage 4	-11.1	0.08
Stage 4	-11.3	0.08
Stage 4	-11.5	0.08
Stage 4	-11.7	0.08
Stage 4	-11.9	0.08
Stage 4	-12.1	0.08
Stage 4	-12.3	0.08
Stage 4	-12.5	0.08
Stage 4	-12.7	0.08
Stage 4	-12.9	0.08
Stage 4	-13.1	0.08

Design Assumption: NominalTipo Risultato: Spostamento		Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 4	-13.3	0.08
Stage 4	-13.5	0.08
Stage 4	-13.7	0.09
Stage 4	-13.9	0.09
Stage 4	-14.1	0.09
Stage 4	-14.3	0.09
Stage 4	-14.5	0.09
Stage 4	-14.7	0.09
Stage 4	-14.9	0.09
Stage 4	-15.1	0.09
Stage 4	-15.3	0.09
Stage 4	-15.5	0.09
Stage 4	-15.7	0.09
Stage 4	-15.9	0.09
Stage 4	-16.1	0.09
Stage 4	-16.3	0.09
Stage 4	-16.5	0.09
Stage 4	-16.7	0.09
Stage 4	-16.9	0.09
Stage 4	-17.1	0.09
Stage 4	-17.3	0.09
Stage 4	-17.5	0.09
Stage 4	-17.7	0.09
Stage 4	-17.9	0.09
Stage 4	-18.1	0.09
Stage 4	-18.3	0.09
Stage 4	-18.5	0.09
Stage 4	-18.7	0.09
Stage 4	-18.9	0.09
Stage 4	-19.1	0.09
Stage 4	-19.3	0.09
Stage 4	-19.5	0.09
Stage 4	-19.7	0.09
Stage 4	-19.9	0.09
Stage 4	-20	0.09

5.1.5. Tabella Spostamento Nominal - LEFT Stage: Stage 5

Design Assumption: Nominal		Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)	
Stage 5	0	13	
Stage 5	-0.2	13.51	
Stage 5	-0.4	14.01	
Stage 5	-0.5	14.26	
Stage 5	-0.7	14.77	
Stage 5	-0.9	15.27	
Stage 5	-1.1	15.76	
Stage 5	-1.3	16.23	
Stage 5	-1.5	16.68	
Stage 5	-1.7	17.11	
Stage 5	-1.9	17.51	
Stage 5	-2.1	17.87	
Stage 5	-2.3	18.2	
Stage 5	-2.5	18.48	
Stage 5	-2.7	18.72	
Stage 5	-2.9	18.91	
Stage 5	-3.1	19.04	
Stage 5	-3.3	19.12	
Stage 5	-3.5	19.15	
Stage 5	-3.7	19.12	
Stage 5	-3.9	19.02	
Stage 5	-4.1	18.87	
Stage 5	-4.3	18.66	
Stage 5	-4.5	18.38	
Stage 5	-4.7	18.05	
Stage 5	-4.9	17.66	
Stage 5	-5.1	17.21	
Stage 5	-5.3	16.71	
Stage 5	-5.5	16.15	
Stage 5	-5.7	15.55	
Stage 5	-5.9	14.91	
Stage 5	-6.1	14.23	
Stage 5	-6.3	13.53	
Stage 5	-6.5	12.79	
Stage 5	-6.7	12.04	
Stage 5	-6.9	11.28	
Stage 5	-7.1	10.52	
Stage 5	-7.3	9.77	
Stage 5	-7.5	9.04	
Stage 5	-7.7	8.32	
Stage 5	-7.9	7.63	
Stage 5	-8.1	6.98	
Stage 5	-8.3	6.36	
Stage 5	-8.5	5.77	
Stage 5	-8.7	5.23	
Stage 5	-8.9	4.72	
Stage 5	-9.1	4.25	
Stage 5	-9.3	3.82	
Stage 5	-9.5	3.43	
Stage 5	-9.7	3.08	
Stage 5	-9.9	2.76	
Stage 5	-10.1	2.48	
Stage 5	-10.3	2.23	
Stage 5	-10.5	2.01	
Stage 5	-10.7	1.82	
Stage 5	-10.9	1.65	
Stage 5	-11.1	1.51	
Stage 5	-11.3	1.4	
Stage 5	-11.5	1.3	
Stage 5	-11.7	1.22	
Stage 5	-11.9	1.16	
Stage 5	-12.1	1.11	
Stage 5	-12.3	1.08	
Stage 5	-12.5	1.06	
Stage 5	-12.7	1.05	
Stage 5	-12.9	1.04	
Stage 5	-13.1	1.05	

Design Assumption: Nominal		Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)	
Stage 5	-13.3	1.06	
Stage 5	-13.5	1.07	
Stage 5	-13.7	1.09	
Stage 5	-13.9	1.11	
Stage 5	-14.1	1.13	
Stage 5	-14.3	1.16	
Stage 5	-14.5	1.19	
Stage 5	-14.7	1.21	
Stage 5	-14.9	1.24	
Stage 5	-15.1	1.27	
Stage 5	-15.3	1.29	
Stage 5	-15.5	1.32	
Stage 5	-15.7	1.34	
Stage 5	-15.9	1.37	
Stage 5	-16.1	1.39	
Stage 5	-16.3	1.41	
Stage 5	-16.5	1.43	
Stage 5	-16.7	1.45	
Stage 5	-16.9	1.47	
Stage 5	-17.1	1.48	
Stage 5	-17.3	1.5	
Stage 5	-17.5	1.51	
Stage 5	-17.7	1.53	
Stage 5	-17.9	1.54	
Stage 5	-18.1	1.55	
Stage 5	-18.3	1.56	
Stage 5	-18.5	1.57	
Stage 5	-18.7	1.58	
Stage 5	-18.9	1.59	
Stage 5	-19.1	1.6	
Stage 5	-19.3	1.61	
Stage 5	-19.5	1.62	
Stage 5	-19.7	1.63	
Stage 5	-19.9	1.63	
Stage 5	-20	1.64	

5.1.6. Tabella Spostamento Nominal - LEFT Stage: Stage 6

Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 6	0	28.12
Stage 6	-0.2	28.87
Stage 6	-0.4	29.63
Stage 6	-0.5	30.01
Stage 6	-0.7	30.76
Stage 6	-0.9	31.51
Stage 6	-1.1	32.23
Stage 6	-1.3	32.93
Stage 6	-1.5	33.58
Stage 6	-1.7	34.19
Stage 6	-1.9	34.74
Stage 6	-2.1	35.23
Stage 6	-2.3	35.65
Stage 6	-2.5	35.98
Stage 6	-2.7	36.24
Stage 6	-2.9	36.41
Stage 6	-3.1	36.48
Stage 6	-3.3	36.46
Stage 6	-3.5	36.33
Stage 6	-3.7	36.11
Stage 6	-3.9	35.78
Stage 6	-4.1	35.35
Stage 6	-4.3	34.82
Stage 6	-4.5	34.18
Stage 6	-4.7	33.45
Stage 6	-4.9	32.61
Stage 6	-5.1	31.69
Stage 6	-5.3	30.68
Stage 6	-5.5	29.58
Stage 6	-5.7	28.42
Stage 6	-5.9	27.18
Stage 6	-6.1	25.89
Stage 6	-6.3	24.55
Stage 6	-6.5	23.18
Stage 6	-6.7	21.78
Stage 6	-6.9	20.37
Stage 6	-7.1	18.96
Stage 6	-7.3	17.56
Stage 6	-7.5	16.19
Stage 6	-7.7	14.85
Stage 6	-7.9	13.56
Stage 6	-8.1	12.32
Stage 6	-8.3	11.14
Stage 6	-8.5	10.02
Stage 6	-8.7	8.97
Stage 6	-8.9	7.99
Stage 6	-9.1	7.08
Stage 6	-9.3	6.24
Stage 6	-9.5	5.47
Stage 6	-9.7	4.77
Stage 6	-9.9	4.14
Stage 6	-10.1	3.57
Stage 6	-10.3	3.07
Stage 6	-10.5	2.62
Stage 6	-10.7	2.23
Stage 6	-10.9	1.89
Stage 6	-11.1	1.6
Stage 6	-11.3	1.35
Stage 6	-11.5	1.15
Stage 6	-11.7	0.98
Stage 6	-11.9	0.84
Stage 6	-12.1	0.73
Stage 6	-12.3	0.66
Stage 6	-12.5	0.6
Stage 6	-12.7	0.56
Stage 6	-12.9	0.55
Stage 6	-13.1	0.54

Design Assumption: NominalTipo Risultato: Spostamento		Muro: LEFT
Stage	Z (m)	Spostamento orizzontale (mm)
Stage 6	-13.3	0.55
Stage 6	-13.5	0.58
Stage 6	-13.7	0.61
Stage 6	-13.9	0.64
Stage 6	-14.1	0.69
Stage 6	-14.3	0.73
Stage 6	-14.5	0.78
Stage 6	-14.7	0.84
Stage 6	-14.9	0.89
Stage 6	-15.1	0.94
Stage 6	-15.3	1
Stage 6	-15.5	1.05
Stage 6	-15.7	1.1
Stage 6	-15.9	1.15
Stage 6	-16.1	1.19
Stage 6	-16.3	1.24
Stage 6	-16.5	1.28
Stage 6	-16.7	1.32
Stage 6	-16.9	1.36
Stage 6	-17.1	1.39
Stage 6	-17.3	1.42
Stage 6	-17.5	1.46
Stage 6	-17.7	1.49
Stage 6	-17.9	1.51
Stage 6	-18.1	1.54
Stage 6	-18.3	1.56
Stage 6	-18.5	1.59
Stage 6	-18.7	1.61
Stage 6	-18.9	1.63
Stage 6	-19.1	1.66
Stage 6	-19.3	1.68
Stage 6	-19.5	1.7
Stage 6	-19.7	1.72
Stage 6	-19.9	1.74
Stage 6	-20	1.75

5.2. Involuppi Spostamento Nominal

5.3. Risultati Paratia

5.3.1. Tabella Risultati Paratia Nominal - Stage: Stage 1

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.5	0	0
Stage 1	-0.7	0	0
Stage 1	-0.9	0	0
Stage 1	-1.1	0	0
Stage 1	-1.3	0	0
Stage 1	-1.5	0	0
Stage 1	-1.7	0	0
Stage 1	-1.9	0	0
Stage 1	-2.1	0	0
Stage 1	-2.3	0	0
Stage 1	-2.5	0	0
Stage 1	-2.7	0	0
Stage 1	-2.9	0	0
Stage 1	-3.1	0	0
Stage 1	-3.3	0	0
Stage 1	-3.5	0	0
Stage 1	-3.7	0	0
Stage 1	-3.9	0	0
Stage 1	-4.1	0	0
Stage 1	-4.3	0	0
Stage 1	-4.5	0	0
Stage 1	-4.7	0	0
Stage 1	-4.9	0	0
Stage 1	-5.1	0	0
Stage 1	-5.3	0	0
Stage 1	-5.5	0	0
Stage 1	-5.7	0	0
Stage 1	-5.9	0	0
Stage 1	-6.1	0	0
Stage 1	-6.3	0	0
Stage 1	-6.5	0	0
Stage 1	-6.7	0	0
Stage 1	-6.9	0	0
Stage 1	-7.1	0	0
Stage 1	-7.3	0	0
Stage 1	-7.5	0	0
Stage 1	-7.7	0	0
Stage 1	-7.9	0	0
Stage 1	-8.1	0	0
Stage 1	-8.3	0	0
Stage 1	-8.5	0	0
Stage 1	-8.7	0	0
Stage 1	-8.9	0	0
Stage 1	-9.1	0	0
Stage 1	-9.3	0	0
Stage 1	-9.5	0	0
Stage 1	-9.7	0	0
Stage 1	-9.9	0	0
Stage 1	-10.1	0	0
Stage 1	-10.3	0	0
Stage 1	-10.5	0	0
Stage 1	-10.7	0	0
Stage 1	-10.9	0	0
Stage 1	-11.1	0	0
Stage 1	-11.3	0	0
Stage 1	-11.5	0	0
Stage 1	-11.7	0	0
Stage 1	-11.9	0	0
Stage 1	-12.1	0	0
Stage 1	-12.3	0	0
Stage 1	-12.5	0	0

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-12.7	0	0
Stage 1	-12.9	0	0
Stage 1	-13.1	0	0
Stage 1	-13.3	0	0
Stage 1	-13.5	0	0
Stage 1	-13.7	0	0
Stage 1	-13.9	0	0
Stage 1	-14.1	0	0
Stage 1	-14.3	0	0
Stage 1	-14.5	0	0
Stage 1	-14.7	0	0
Stage 1	-14.9	0	0
Stage 1	-15.1	0	0
Stage 1	-15.3	0	0
Stage 1	-15.5	0	0
Stage 1	-15.7	0	0
Stage 1	-15.9	0	0
Stage 1	-16.1	0	0
Stage 1	-16.3	0	0
Stage 1	-16.5	0	0
Stage 1	-16.7	0	0
Stage 1	-16.9	0	0
Stage 1	-17.1	0	0
Stage 1	-17.3	0	0
Stage 1	-17.5	0	0
Stage 1	-17.7	0	0
Stage 1	-17.9	0	0
Stage 1	-18.1	0	0
Stage 1	-18.3	0	0
Stage 1	-18.5	0	0
Stage 1	-18.7	0	0
Stage 1	-18.9	0	0
Stage 1	-19.1	0	0
Stage 1	-19.3	0	0
Stage 1	-19.5	0	0
Stage 1	-19.7	0	0
Stage 1	-19.9	0	0
Stage 1	-20	0	0

5.3.2. Tabella Risultati Paratia Nominal - Stage: Stage 2

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	0	0	-0.08
Stage 2	-0.2	-0.02	-0.08
Stage 2	-0.4	-0.03	-0.06
Stage 2	-0.5	-0.03	-0.05
Stage 2	-0.7	-0.04	-0.04
Stage 2	-0.9	-0.04	-0.02
Stage 2	-1.1	-0.05	-0.01
Stage 2	-1.3	-0.05	-0.01
Stage 2	-1.5	-0.05	0
Stage 2	-1.7	-0.05	0
Stage 2	-1.9	-0.05	0
Stage 2	-2.1	-0.05	0
Stage 2	-2.3	-0.05	0.01
Stage 2	-2.5	-0.04	0.01
Stage 2	-2.7	-0.04	0.01
Stage 2	-2.9	-0.04	0.01
Stage 2	-3.1	-0.04	0.01
Stage 2	-3.3	-0.04	0.01
Stage 2	-3.5	-0.03	0.01
Stage 2	-3.7	-0.03	0.01
Stage 2	-3.9	-0.03	0.01
Stage 2	-4.1	-0.03	0.01
Stage 2	-4.3	-0.03	0.01
Stage 2	-4.5	-0.02	0.01
Stage 2	-4.7	-0.02	0.01
Stage 2	-4.9	-0.02	0.01
Stage 2	-5.1	-0.02	0.01
Stage 2	-5.3	-0.02	0.01
Stage 2	-5.5	-0.01	0.01
Stage 2	-5.7	-0.01	0.01
Stage 2	-5.9	-0.01	0.01
Stage 2	-6.1	-0.01	0.01
Stage 2	-6.3	-0.01	0.01
Stage 2	-6.5	-0.01	0.01
Stage 2	-6.7	0	0.01
Stage 2	-6.9	0	0.01
Stage 2	-7.1	0	0.01
Stage 2	-7.3	0	0.01
Stage 2	-7.5	0	0
Stage 2	-7.7	0	0
Stage 2	-7.9	0	0
Stage 2	-8.1	0	0
Stage 2	-8.3	0	0
Stage 2	-8.5	0	0
Stage 2	-8.7	0	0
Stage 2	-8.9	0	0
Stage 2	-9.1	0	0
Stage 2	-9.3	0	0
Stage 2	-9.5	0	0
Stage 2	-9.7	0	0
Stage 2	-9.9	0	0
Stage 2	-10.1	0	0
Stage 2	-10.3	0	0
Stage 2	-10.5	0	0
Stage 2	-10.7	0	0
Stage 2	-10.9	0	0
Stage 2	-11.1	0	0
Stage 2	-11.3	0	0
Stage 2	-11.5	0	0
Stage 2	-11.7	0	0
Stage 2	-11.9	0	0
Stage 2	-12.1	0	0
Stage 2	-12.3	0	0
Stage 2	-12.5	0	0
Stage 2	-12.7	0	0
Stage 2	-12.9	0	0
Stage 2	-13.1	0	0

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-13.3	0	0
Stage 2	-13.5	0	0
Stage 2	-13.7	0	0
Stage 2	-13.9	0	0
Stage 2	-14.1	0	0
Stage 2	-14.3	0	0
Stage 2	-14.5	0	0
Stage 2	-14.7	0	0
Stage 2	-14.9	0	0
Stage 2	-15.1	0	0
Stage 2	-15.3	0	0
Stage 2	-15.5	0	0
Stage 2	-15.7	0	0
Stage 2	-15.9	0	0
Stage 2	-16.1	0	0
Stage 2	-16.3	0	0
Stage 2	-16.5	0	0
Stage 2	-16.7	0	0
Stage 2	-16.9	0	0
Stage 2	-17.1	0	0
Stage 2	-17.3	0	0
Stage 2	-17.5	0	0
Stage 2	-17.7	0	0
Stage 2	-17.9	0	0
Stage 2	-18.1	0	0
Stage 2	-18.3	0	0
Stage 2	-18.5	0	0
Stage 2	-18.7	0	0
Stage 2	-18.9	0	0
Stage 2	-19.1	0	0
Stage 2	-19.3	0	0
Stage 2	-19.5	0	0
Stage 2	-19.7	0	0
Stage 2	-19.9	0	0
Stage 2	-20	0	0

5.3.3. Tabella Risultati Paratia Nominal - Stage: Stage 3

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	0	0	-0.08
Stage 3	-0.2	-0.02	-0.08
Stage 3	-0.4	-0.1	-0.41
Stage 3	-0.5	-0.18	-0.85
Stage 3	-0.7	-0.46	-1.39
Stage 3	-0.9	-0.94	-2.41
Stage 3	-1.1	-1.68	-3.69
Stage 3	-1.3	-3.06	-6.92
Stage 3	-1.5	-4.83	-8.86
Stage 3	-1.7	-6.73	-9.46
Stage 3	-1.9	-8.46	-8.67
Stage 3	-2.1	-9.85	-6.96
Stage 3	-2.3	-10.93	-5.39
Stage 3	-2.5	-11.72	-3.96
Stage 3	-2.7	-12.26	-2.66
Stage 3	-2.9	-12.55	-1.49
Stage 3	-3.1	-12.65	-0.46
Stage 3	-3.3	-12.56	0.42
Stage 3	-3.5	-12.33	1.17
Stage 3	-3.7	-11.97	1.79
Stage 3	-3.9	-11.51	2.3
Stage 3	-4.1	-10.97	2.69
Stage 3	-4.3	-10.38	2.98
Stage 3	-4.5	-9.74	3.17
Stage 3	-4.7	-9.09	3.27
Stage 3	-4.9	-8.43	3.29
Stage 3	-5.1	-7.78	3.24
Stage 3	-5.3	-7.16	3.11
Stage 3	-5.5	-6.58	2.92
Stage 3	-5.7	-6.04	2.67
Stage 3	-5.9	-5.57	2.36
Stage 3	-6.1	-5.17	2.01
Stage 3	-6.3	-4.85	1.6
Stage 3	-6.5	-4.62	1.15
Stage 3	-6.7	-4.49	0.66
Stage 3	-6.9	-4.46	0.13
Stage 3	-7.1	-4.55	-0.43
Stage 3	-7.3	-4.52	0.13
Stage 3	-7.5	-4.41	0.58
Stage 3	-7.7	-4.22	0.92
Stage 3	-7.9	-3.98	1.19
Stage 3	-8.1	-3.71	1.37
Stage 3	-8.3	-3.41	1.49
Stage 3	-8.5	-3.1	1.56
Stage 3	-8.7	-2.78	1.58
Stage 3	-8.9	-2.47	1.57
Stage 3	-9.1	-2.17	1.52
Stage 3	-9.3	-1.87	1.45
Stage 3	-9.5	-1.6	1.36
Stage 3	-9.7	-1.35	1.27
Stage 3	-9.9	-1.12	1.16
Stage 3	-10.1	-0.91	1.05
Stage 3	-10.3	-0.72	0.94
Stage 3	-10.5	-0.55	0.83
Stage 3	-10.7	-0.4	0.73
Stage 3	-10.9	-0.28	0.63
Stage 3	-11.1	-0.17	0.54
Stage 3	-11.3	-0.08	0.45
Stage 3	-11.5	-0.01	0.37
Stage 3	-11.7	0.05	0.3
Stage 3	-11.9	0.1	0.24
Stage 3	-12.1	0.14	0.18
Stage 3	-12.3	0.16	0.13
Stage 3	-12.5	0.18	0.09
Stage 3	-12.7	0.19	0.05
Stage 3	-12.9	0.19	0.02
Stage 3	-13.1	0.19	0

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 3	-13.3	0.19	-0.02
Stage 3	-13.5	0.18	-0.04
Stage 3	-13.7	0.17	-0.05
Stage 3	-13.9	0.16	-0.06
Stage 3	-14.1	0.15	-0.06
Stage 3	-14.3	0.13	-0.07
Stage 3	-14.5	0.12	-0.07
Stage 3	-14.7	0.11	-0.07
Stage 3	-14.9	0.09	-0.07
Stage 3	-15.1	0.08	-0.06
Stage 3	-15.3	0.07	-0.06
Stage 3	-15.5	0.06	-0.05
Stage 3	-15.7	0.05	-0.05
Stage 3	-15.9	0.04	-0.04
Stage 3	-16.1	0.03	-0.04
Stage 3	-16.3	0.02	-0.03
Stage 3	-16.5	0.02	-0.03
Stage 3	-16.7	0.01	-0.03
Stage 3	-16.9	0.01	-0.02
Stage 3	-17.1	0.01	-0.02
Stage 3	-17.3	0	-0.01
Stage 3	-17.5	0	-0.01
Stage 3	-17.7	0	-0.01
Stage 3	-17.9	0	-0.01
Stage 3	-18.1	0	0
Stage 3	-18.3	0	0
Stage 3	-18.5	0	0
Stage 3	-18.7	0	0
Stage 3	-18.9	0	0
Stage 3	-19.1	0	0
Stage 3	-19.3	0	0
Stage 3	-19.5	0	0
Stage 3	-19.7	0	0
Stage 3	-19.9	0	0
Stage 3	-20	0	0

5.3.4. Tabella Risultati Paratia Nominal - Stage: Stage 4

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 4	0	0	-0.08
Stage 4	-0.2	-0.02	-0.08
Stage 4	-0.4	-0.1	-0.41
Stage 4	-0.5	-0.18	-0.85
Stage 4	-0.7	-0.46	-1.39
Stage 4	-0.9	-0.94	-2.4
Stage 4	-1.1	-1.68	-3.69
Stage 4	-1.3	-3.06	-6.91
Stage 4	-1.5	-4.83	-8.85
Stage 4	-1.7	-6.72	-9.46
Stage 4	-1.9	-8.46	-8.67
Stage 4	-2.1	-9.85	-6.96
Stage 4	-2.3	-10.93	-5.39
Stage 4	-2.5	-11.72	-3.95
Stage 4	-2.7	-12.25	-2.66
Stage 4	-2.9	-12.55	-1.49
Stage 4	-3.1	-12.64	-0.47
Stage 4	-3.3	-12.56	0.42
Stage 4	-3.5	-12.32	1.17
Stage 4	-3.7	-11.97	1.79
Stage 4	-3.9	-11.51	2.29
Stage 4	-4.1	-10.97	2.68
Stage 4	-4.3	-10.38	2.97
Stage 4	-4.5	-9.74	3.17
Stage 4	-4.7	-9.09	3.27
Stage 4	-4.9	-8.43	3.29
Stage 4	-5.1	-7.78	3.24
Stage 4	-5.3	-7.16	3.11
Stage 4	-5.5	-6.58	2.92
Stage 4	-5.7	-6.04	2.67
Stage 4	-5.9	-5.57	2.36
Stage 4	-6.1	-5.17	2
Stage 4	-6.3	-4.85	1.6
Stage 4	-6.5	-4.62	1.15
Stage 4	-6.7	-4.49	0.66
Stage 4	-6.9	-4.46	0.13
Stage 4	-7.1	-4.55	-0.43
Stage 4	-7.3	-4.52	0.13
Stage 4	-7.5	-4.41	0.58
Stage 4	-7.7	-4.22	0.93
Stage 4	-7.9	-3.99	1.19
Stage 4	-8.1	-3.71	1.37
Stage 4	-8.3	-3.41	1.49
Stage 4	-8.5	-3.1	1.56
Stage 4	-8.7	-2.78	1.58
Stage 4	-8.9	-2.47	1.57
Stage 4	-9.1	-2.17	1.52
Stage 4	-9.3	-1.88	1.45
Stage 4	-9.5	-1.6	1.37
Stage 4	-9.7	-1.35	1.27
Stage 4	-9.9	-1.12	1.16
Stage 4	-10.1	-0.91	1.05
Stage 4	-10.3	-0.72	0.94
Stage 4	-10.5	-0.55	0.83
Stage 4	-10.7	-0.4	0.73
Stage 4	-10.9	-0.28	0.63
Stage 4	-11.1	-0.17	0.54
Stage 4	-11.3	-0.08	0.45
Stage 4	-11.5	-0.01	0.37
Stage 4	-11.7	0.05	0.3
Stage 4	-11.9	0.1	0.24
Stage 4	-12.1	0.14	0.18
Stage 4	-12.3	0.16	0.13
Stage 4	-12.5	0.18	0.09
Stage 4	-12.7	0.19	0.05
Stage 4	-12.9	0.19	0.02
Stage 4	-13.1	0.19	0

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 4	-13.3	0.19	-0.02
Stage 4	-13.5	0.18	-0.04
Stage 4	-13.7	0.17	-0.05
Stage 4	-13.9	0.16	-0.06
Stage 4	-14.1	0.15	-0.06
Stage 4	-14.3	0.13	-0.07
Stage 4	-14.5	0.12	-0.07
Stage 4	-14.7	0.11	-0.07
Stage 4	-14.9	0.09	-0.07
Stage 4	-15.1	0.08	-0.06
Stage 4	-15.3	0.07	-0.06
Stage 4	-15.5	0.06	-0.05
Stage 4	-15.7	0.05	-0.05
Stage 4	-15.9	0.04	-0.04
Stage 4	-16.1	0.03	-0.04
Stage 4	-16.3	0.02	-0.03
Stage 4	-16.5	0.02	-0.03
Stage 4	-16.7	0.01	-0.03
Stage 4	-16.9	0.01	-0.02
Stage 4	-17.1	0.01	-0.02
Stage 4	-17.3	0	-0.01
Stage 4	-17.5	0	-0.01
Stage 4	-17.7	0	-0.01
Stage 4	-17.9	0	-0.01
Stage 4	-18.1	0	0
Stage 4	-18.3	0	0
Stage 4	-18.5	0	0
Stage 4	-18.7	0	0
Stage 4	-18.9	0	0
Stage 4	-19.1	0	0
Stage 4	-19.3	0	0
Stage 4	-19.5	0	0
Stage 4	-19.7	0	0
Stage 4	-19.9	0	0
Stage 4	-20	0	0

5.3.5. Tabella Risultati Paratia Nominal - Stage: Stage 5

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 5	0	0	-0.08
Stage 5	-0.2	-0.02	-0.08
Stage 5	-0.4	-0.1	-0.41
Stage 5	-0.5	-0.18	-0.85
Stage 5	-0.7	19.84	100.09
Stage 5	-0.9	39.65	99.07
Stage 5	-1.1	59.21	97.79
Stage 5	-1.3	78.21	95.02
Stage 5	-1.5	96.57	91.8
Stage 5	-1.7	114.19	88.06
Stage 5	-1.9	130.96	83.87
Stage 5	-2.1	146.79	79.15
Stage 5	-2.3	161.58	73.98
Stage 5	-2.5	175.24	68.29
Stage 5	-2.7	187.67	62.15
Stage 5	-2.9	198.77	55.49
Stage 5	-3.1	208.44	48.38
Stage 5	-3.3	216.6	40.76
Stage 5	-3.5	223.13	32.69
Stage 5	-3.7	227.96	24.12
Stage 5	-3.9	230.98	15.1
Stage 5	-4.1	232.09	5.58
Stage 5	-4.3	231.22	-4.39
Stage 5	-4.5	228.25	-14.84
Stage 5	-4.7	223.1	-25.75
Stage 5	-4.9	215.67	-37.13
Stage 5	-5.1	205.88	-48.97
Stage 5	-5.3	193.62	-61.28
Stage 5	-5.5	178.82	-74.04
Stage 5	-5.7	161.36	-87.26
Stage 5	-5.9	141.17	-100.94
Stage 5	-6.1	118.16	-115.08
Stage 5	-6.3	92.44	-128.61
Stage 5	-6.5	64.35	-140.45
Stage 5	-6.7	34.22	-150.64
Stage 5	-6.9	2.39	-159.12
Stage 5	-7.1	-30.8	-165.95
Stage 5	-7.3	-59.49	-143.48
Stage 5	-7.5	-83.82	-121.63
Stage 5	-7.7	-103.9	-100.4
Stage 5	-7.9	-119.85	-79.77
Stage 5	-8.1	-132.07	-61.11
Stage 5	-8.3	-140.95	-44.39
Stage 5	-8.5	-146.85	-29.49
Stage 5	-8.7	-150.11	-16.31
Stage 5	-8.9	-151.06	-4.74
Stage 5	-9.1	-149.99	5.32
Stage 5	-9.3	-147.24	13.79
Stage 5	-9.5	-143.08	20.8
Stage 5	-9.7	-137.78	26.48
Stage 5	-9.9	-131.59	30.98
Stage 5	-10.1	-124.71	34.4
Stage 5	-10.3	-117.33	36.88
Stage 5	-10.5	-109.62	38.53
Stage 5	-10.7	-101.74	39.44
Stage 5	-10.9	-93.79	39.73
Stage 5	-11.1	-85.89	39.49
Stage 5	-11.3	-78.14	38.78
Stage 5	-11.5	-70.59	37.71
Stage 5	-11.7	-63.33	36.33
Stage 5	-11.9	-56.39	34.71
Stage 5	-12.1	-49.81	32.9
Stage 5	-12.3	-43.62	30.95
Stage 5	-12.5	-37.83	28.92
Stage 5	-12.7	-32.47	26.83
Stage 5	-12.9	-27.52	24.72
Stage 5	-13.1	-23	22.63

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 5	-13.3	-18.89	20.56
Stage 5	-13.5	-15.18	18.55
Stage 5	-13.7	-11.85	16.61
Stage 5	-13.9	-8.9	14.75
Stage 5	-14.1	-6.31	12.98
Stage 5	-14.3	-4.05	11.31
Stage 5	-14.5	-2.09	9.75
Stage 5	-14.7	-0.44	8.3
Stage 5	-14.9	0.96	6.95
Stage 5	-15.1	2.1	5.72
Stage 5	-15.3	3.02	4.59
Stage 5	-15.5	3.73	3.57
Stage 5	-15.7	4.26	2.65
Stage 5	-15.9	4.62	1.82
Stage 5	-16.1	4.84	1.1
Stage 5	-16.3	4.93	0.46
Stage 5	-16.5	4.91	-0.1
Stage 5	-16.7	4.8	-0.57
Stage 5	-16.9	4.61	-0.97
Stage 5	-17.1	4.35	-1.3
Stage 5	-17.3	4.04	-1.56
Stage 5	-17.5	3.68	-1.76
Stage 5	-17.7	3.3	-1.9
Stage 5	-17.9	2.91	-1.99
Stage 5	-18.1	2.5	-2.02
Stage 5	-18.3	2.1	-2.01
Stage 5	-18.5	1.71	-1.95
Stage 5	-18.7	1.34	-1.85
Stage 5	-18.9	1	-1.7
Stage 5	-19.1	0.7	-1.52
Stage 5	-19.3	0.44	-1.29
Stage 5	-19.5	0.23	-1.03
Stage 5	-19.7	0.09	-0.72
Stage 5	-19.9	0.01	-0.38
Stage 5	-20	0	-0.1

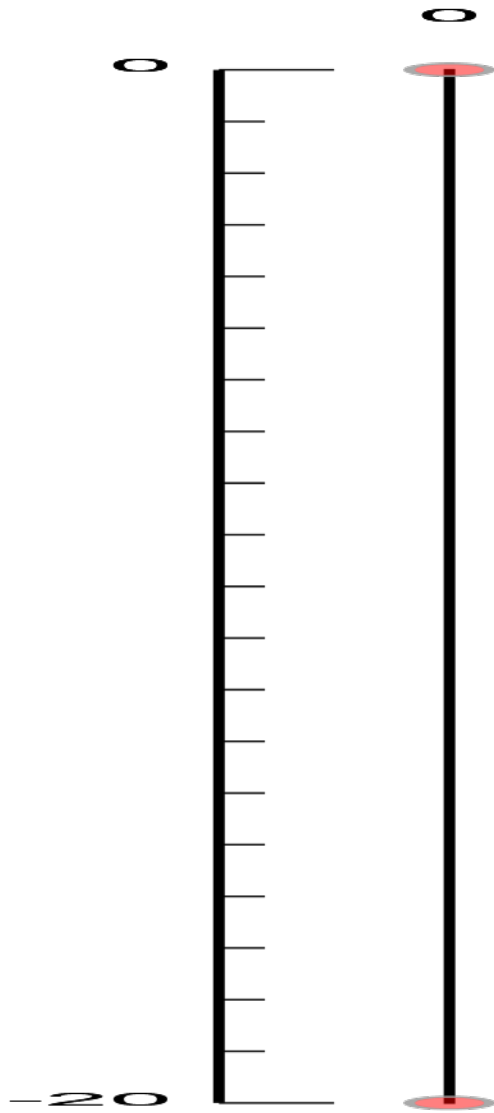
5.3.6. Tabella Risultati Paratia Nominal - Stage: Stage 6

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 6	0	0	-3.55
Stage 6	-0.2	-0.71	-3.55
Stage 6	-0.4	-2.87	-10.82
Stage 6	-0.5	-4.52	-16.49
Stage 6	-0.7	36.58	205.53
Stage 6	-0.9	76.1	197.57
Stage 6	-1.1	113.97	189.34
Stage 6	-1.3	149.89	179.64
Stage 6	-1.5	183.79	169.47
Stage 6	-1.7	215.54	158.79
Stage 6	-1.9	245.07	147.65
Stage 6	-2.1	272.27	135.98
Stage 6	-2.3	297.04	123.87
Stage 6	-2.5	319.29	111.23
Stage 6	-2.7	338.92	98.15
Stage 6	-2.9	355.83	84.54
Stage 6	-3.1	369.92	70.49
Stage 6	-3.3	381.11	55.92
Stage 6	-3.5	389.29	40.91
Stage 6	-3.7	394.37	25.39
Stage 6	-3.9	396.26	9.43
Stage 6	-4.1	394.85	-7.03
Stage 6	-4.3	390.06	-23.94
Stage 6	-4.5	381.79	-41.34
Stage 6	-4.7	369.95	-59.19
Stage 6	-4.9	354.45	-77.52
Stage 6	-5.1	335.19	-96.3
Stage 6	-5.3	312.08	-115.56
Stage 6	-5.5	285.03	-135.26
Stage 6	-5.7	253.94	-155.43
Stage 6	-5.9	218.73	-176.06
Stage 6	-6.1	179.65	-195.38
Stage 6	-6.3	137.8	-209.25
Stage 6	-6.5	93.38	-222.09
Stage 6	-6.7	46.6	-233.94
Stage 6	-6.9	-2.36	-244.76
Stage 6	-7.1	-53.27	-254.59
Stage 6	-7.3	-98.23	-224.81
Stage 6	-7.5	-137.48	-196.21
Stage 6	-7.7	-171.23	-168.79
Stage 6	-7.9	-199.74	-142.51
Stage 6	-8.1	-223.2	-117.34
Stage 6	-8.3	-241.85	-93.23
Stage 6	-8.5	-255.88	-70.13
Stage 6	-8.7	-265.48	-48
Stage 6	-8.9	-270.83	-26.78
Stage 6	-9.1	-272.24	-7.05
Stage 6	-9.3	-270.24	10.02
Stage 6	-9.5	-265.31	24.63
Stage 6	-9.7	-257.91	36.99
Stage 6	-9.9	-248.45	47.31
Stage 6	-10.1	-237.35	55.52
Stage 6	-10.3	-224.99	61.8
Stage 6	-10.5	-211.71	66.36
Stage 6	-10.7	-197.83	69.4
Stage 6	-10.9	-183.61	71.12
Stage 6	-11.1	-169.27	71.7
Stage 6	-11.3	-155.01	71.3
Stage 6	-11.5	-141	70.07
Stage 6	-11.7	-127.37	68.16
Stage 6	-11.9	-114.23	65.68
Stage 6	-12.1	-101.68	62.77
Stage 6	-12.3	-89.77	59.51
Stage 6	-12.5	-78.57	56
Stage 6	-12.7	-68.11	52.32
Stage 6	-12.9	-58.4	48.54
Stage 6	-13.1	-49.46	44.73

Design Assumption: Nominal Risultati Paratia		Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 6	-13.3	-41.27	40.92
Stage 6	-13.5	-33.84	37.18
Stage 6	-13.7	-27.13	33.52
Stage 6	-13.9	-21.13	29.99
Stage 6	-14.1	-15.81	26.61
Stage 6	-14.3	-11.13	23.4
Stage 6	-14.5	-7.06	20.37
Stage 6	-14.7	-3.55	17.52
Stage 6	-14.9	-0.58	14.87
Stage 6	-15.1	1.9	12.42
Stage 6	-15.3	3.94	10.17
Stage 6	-15.5	5.56	8.11
Stage 6	-15.7	6.81	6.24
Stage 6	-15.9	7.72	4.57
Stage 6	-16.1	8.34	3.07
Stage 6	-16.3	8.68	1.74
Stage 6	-16.5	8.8	0.58
Stage 6	-16.7	8.72	-0.42
Stage 6	-16.9	8.46	-1.28
Stage 6	-17.1	8.06	-1.99
Stage 6	-17.3	7.55	-2.58
Stage 6	-17.5	6.94	-3.04
Stage 6	-17.7	6.26	-3.38
Stage 6	-17.9	5.54	-3.61
Stage 6	-18.1	4.79	-3.73
Stage 6	-18.3	4.04	-3.76
Stage 6	-18.5	3.31	-3.69
Stage 6	-18.7	2.6	-3.52
Stage 6	-18.9	1.95	-3.27
Stage 6	-19.1	1.36	-2.93
Stage 6	-19.3	0.86	-2.51
Stage 6	-19.5	0.46	-2.01
Stage 6	-19.7	0.17	-1.42
Stage 6	-19.9	0.02	-0.76
Stage 6	-20	0	-0.2

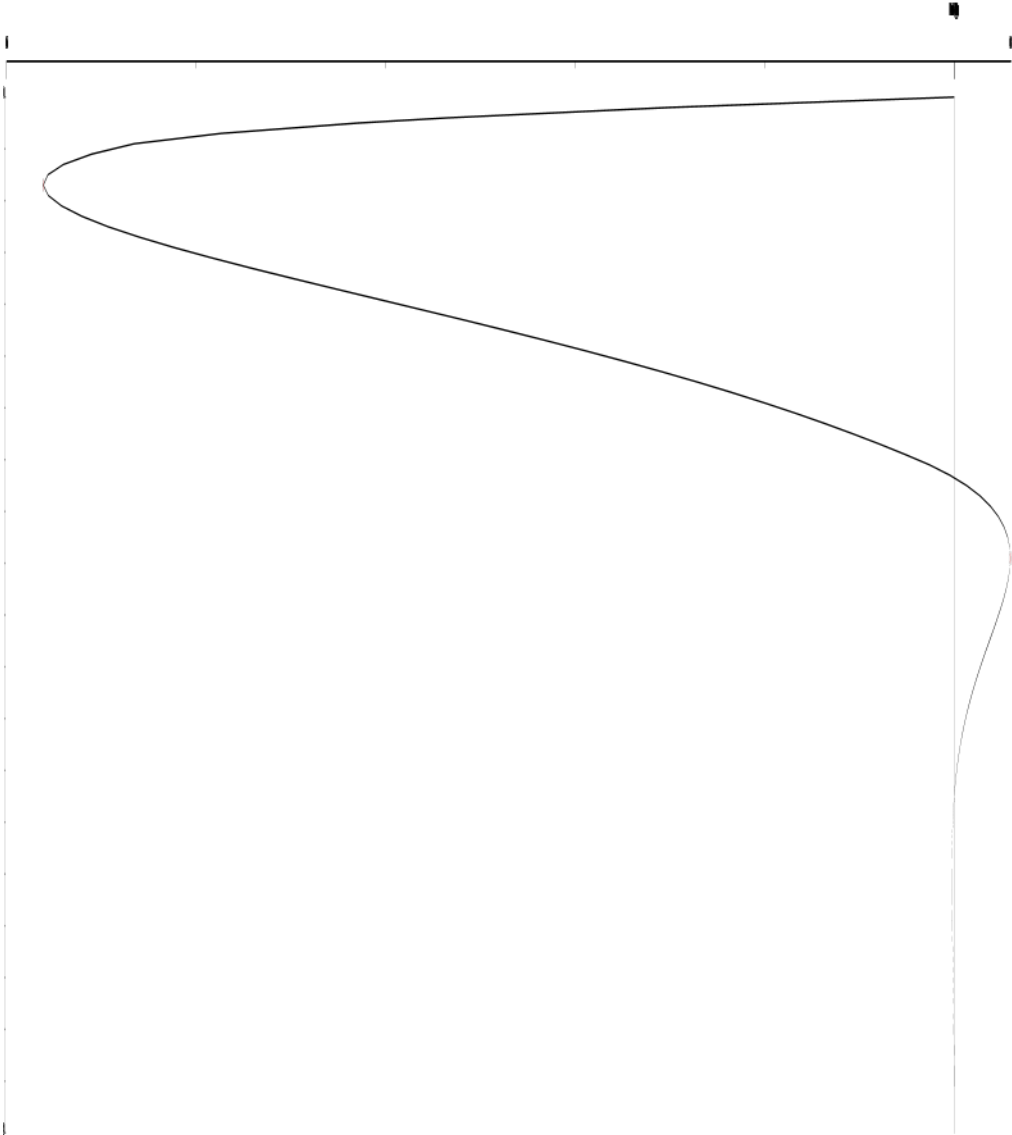
5.3.7. Grafico Momento Nominal - Stage: Stage 1

Momento (kN*m/m)



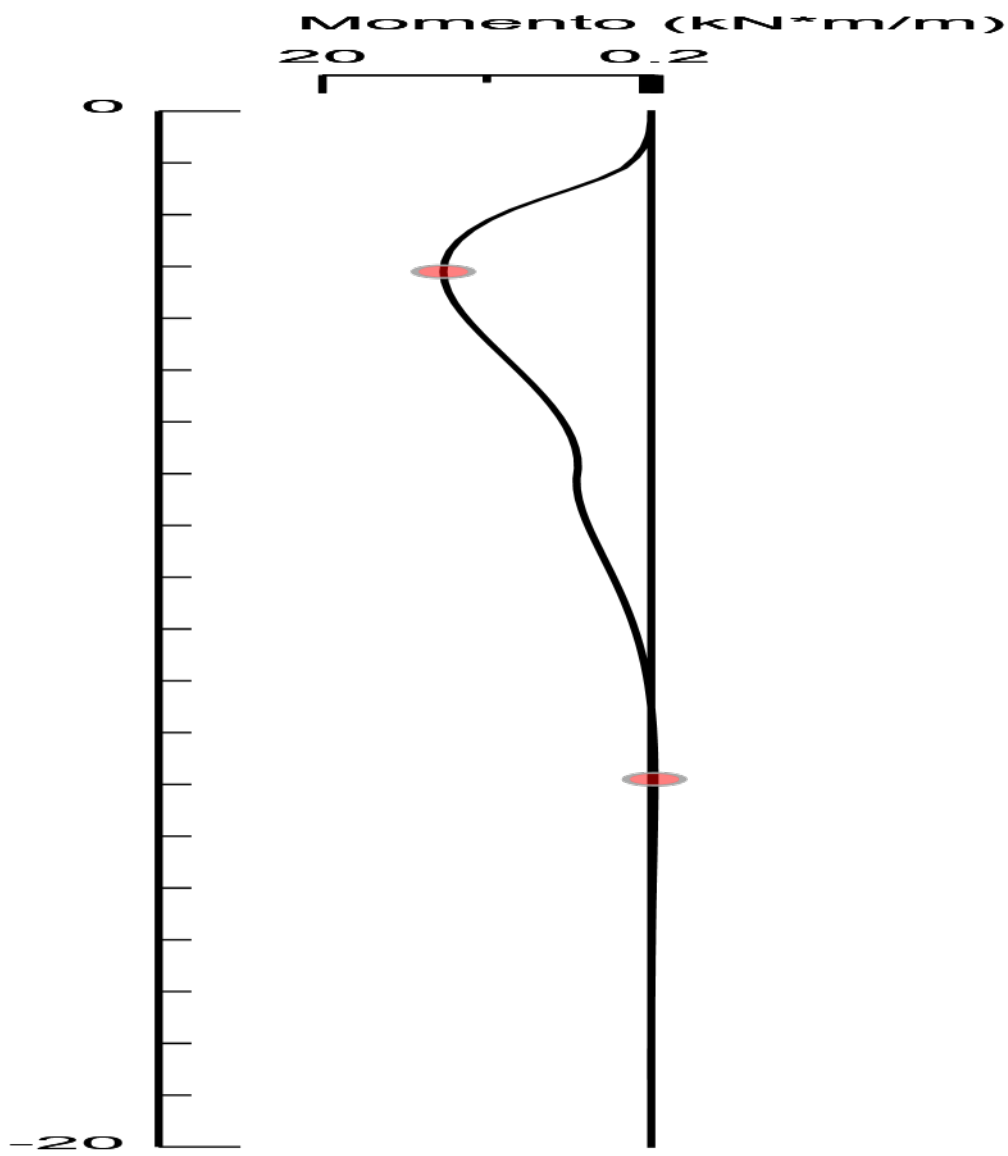
Design Assumption: Nominal
Stage: Stage 1
Paratia: WallElement

5.3.8. Grafico Momento Nominal - Stage: Stage 2



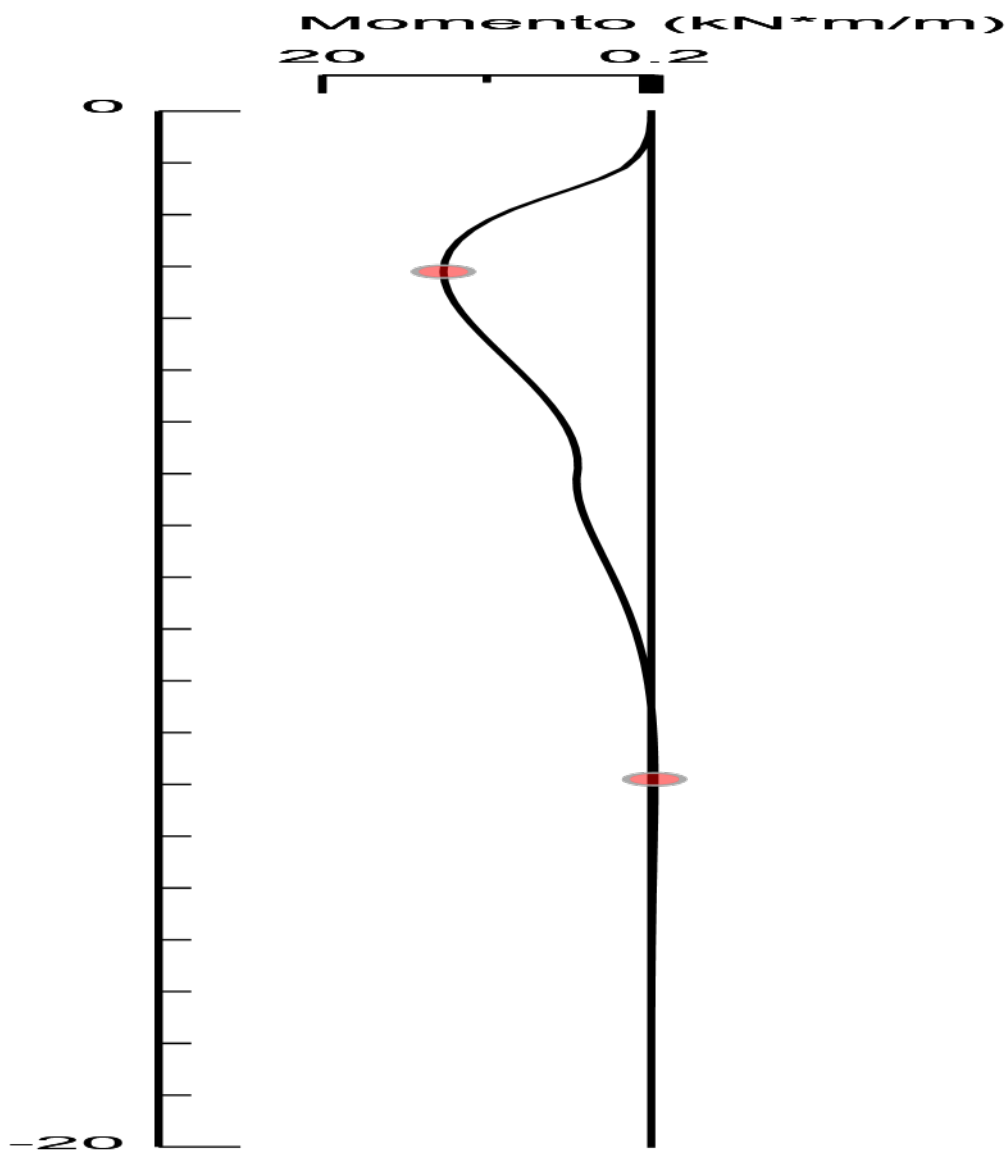
Design Assumption: Nominal
Stage: Stage 2
Paratia: WallElement

5.3.9. Grafico Momento Nominal - Stage: Stage 3



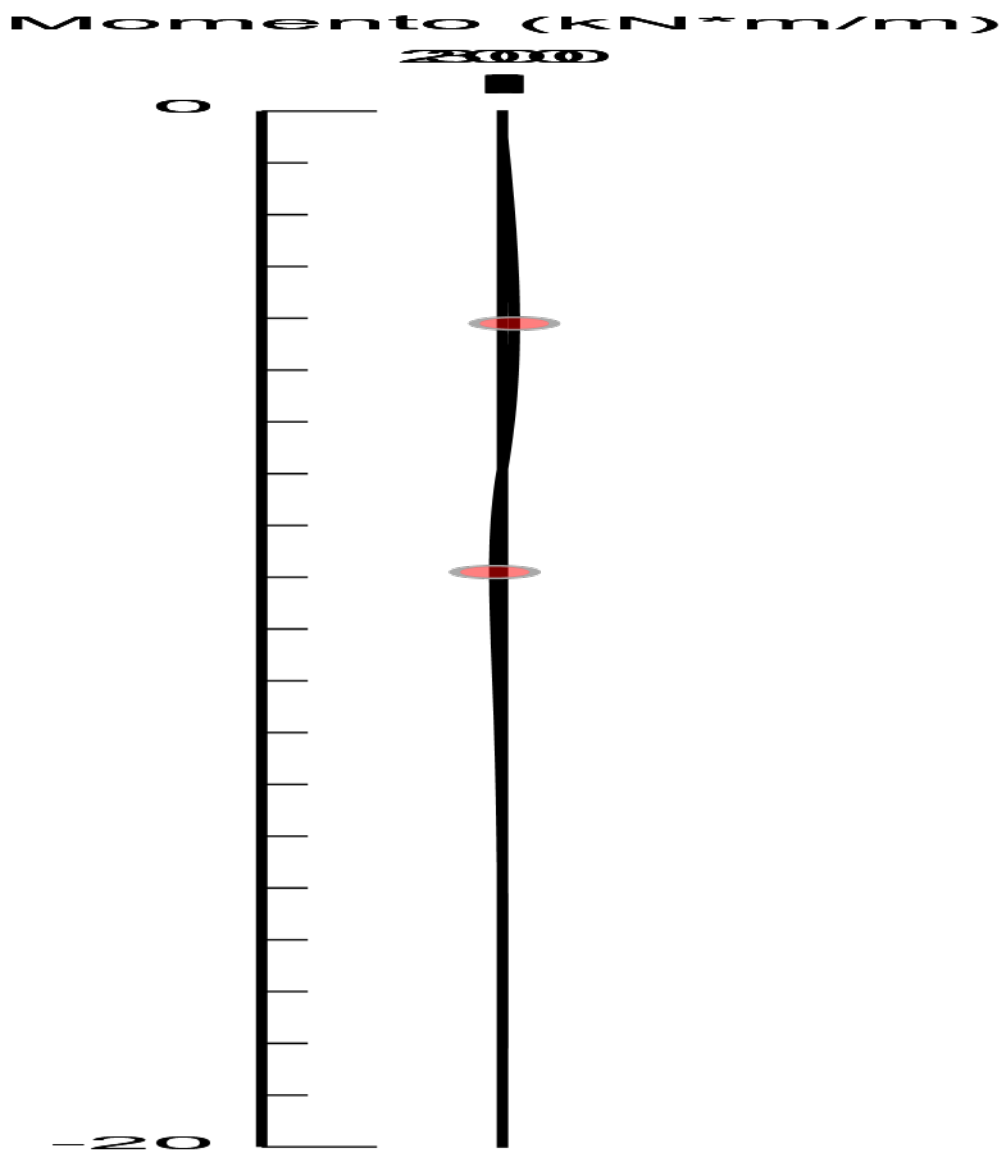
Design Assumption: Nominal
Stage: Stage 3
Paratia: WallElement

5.3.10. Grafico Momento Nominal - Stage: Stage 4



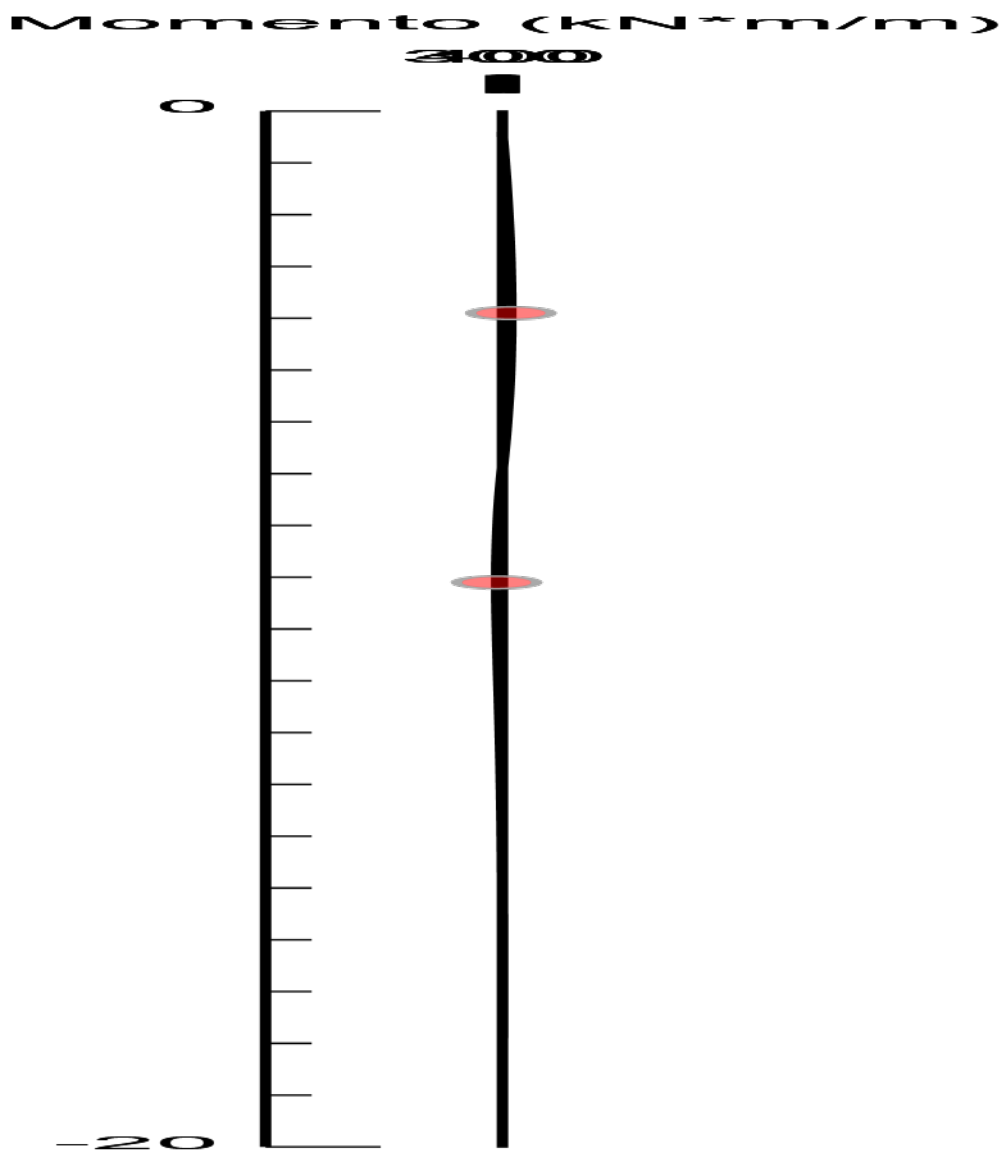
Design Assumption: Nominal
Stage: Stage 4
Paratia: WallElement

5.3.11. Grafico Momento Nominal - Stage: Stage 5



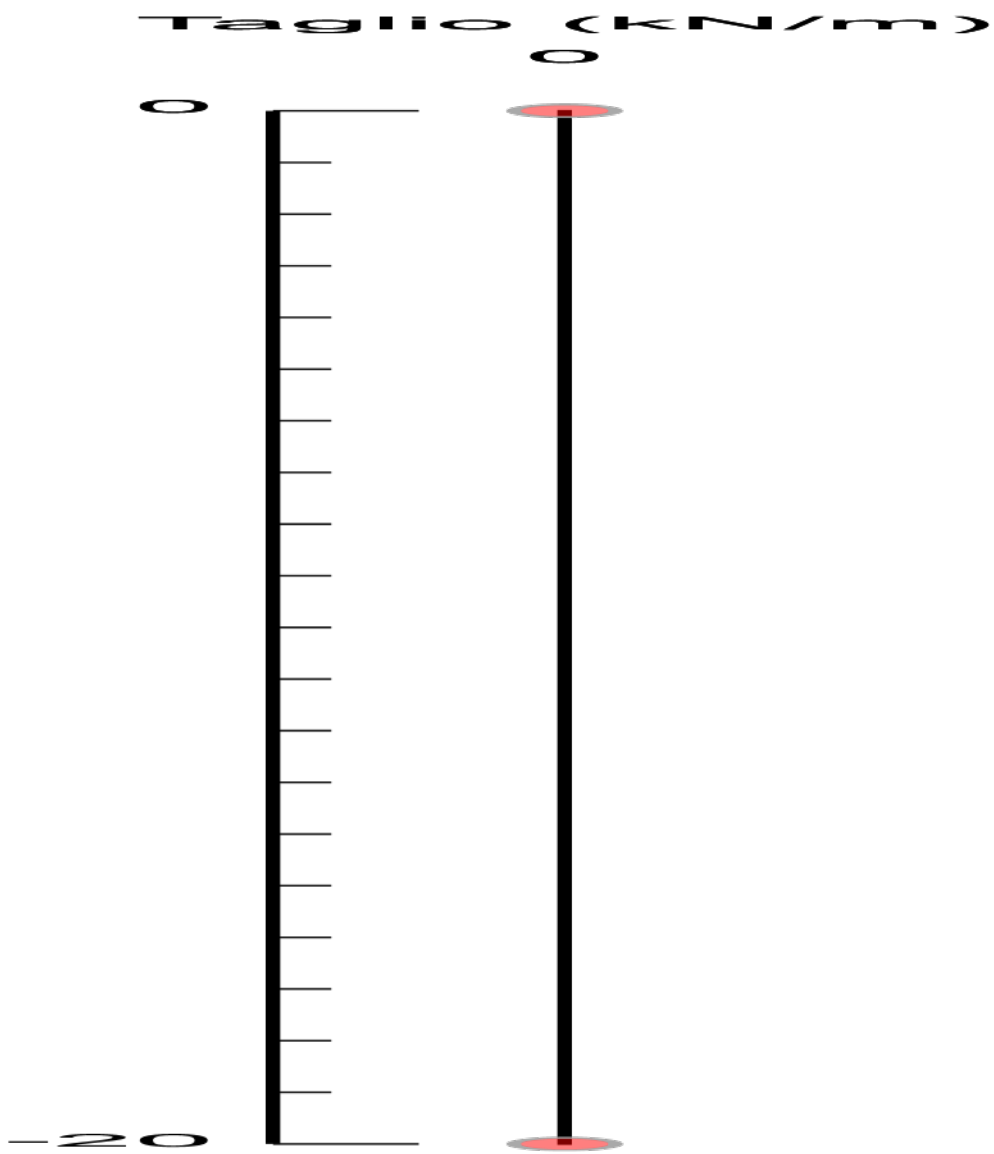
Design Assumption: Nominal
Stage: Stage 5
Paratia: WallElement

5.3.12. Grafico Momento Nominal - Stage: Stage 6



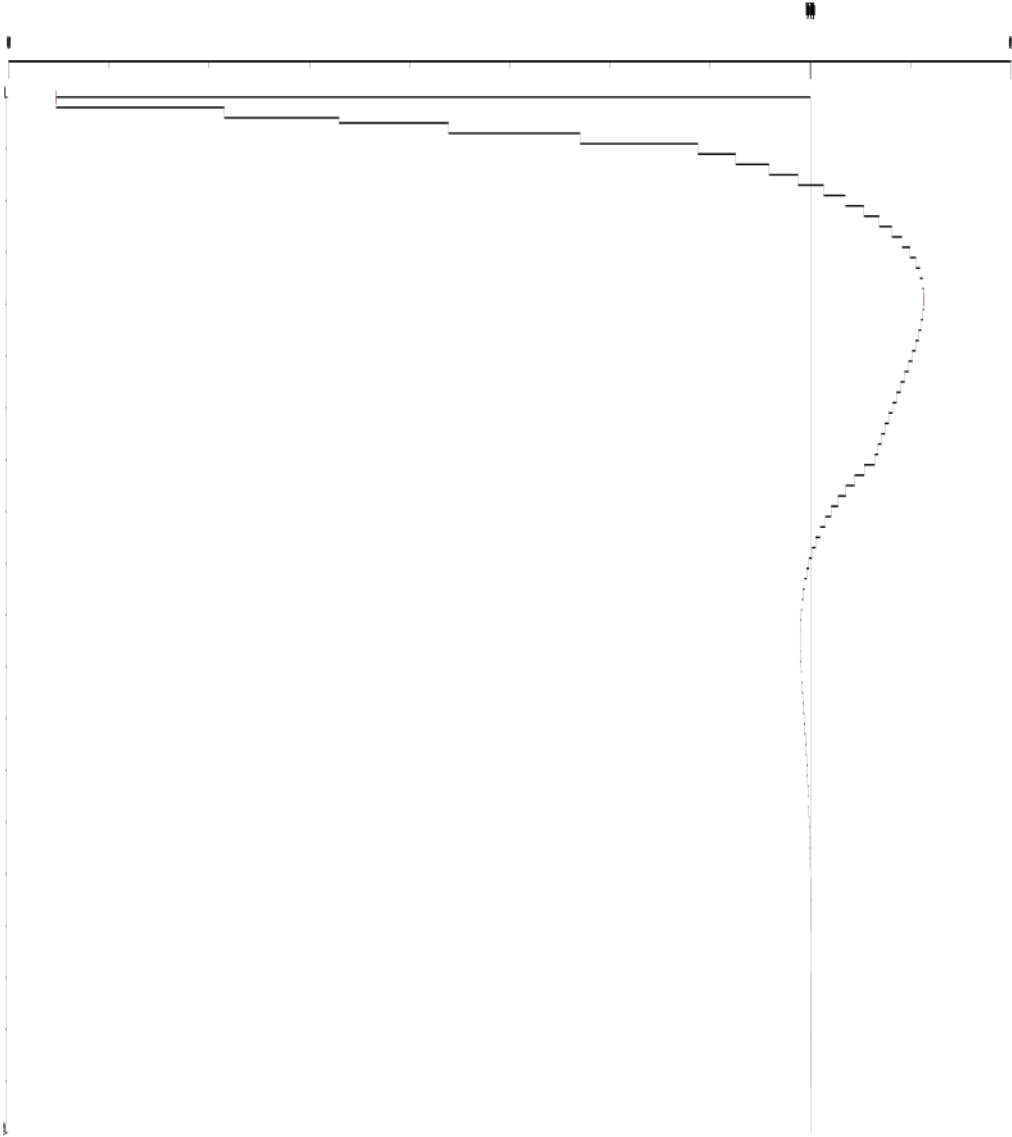
Design Assumption: Nominal
Stage: Stage 6
Paratia: WallElement

5.3.13. Grafico Taglio Nominal - Stage: Stage 1



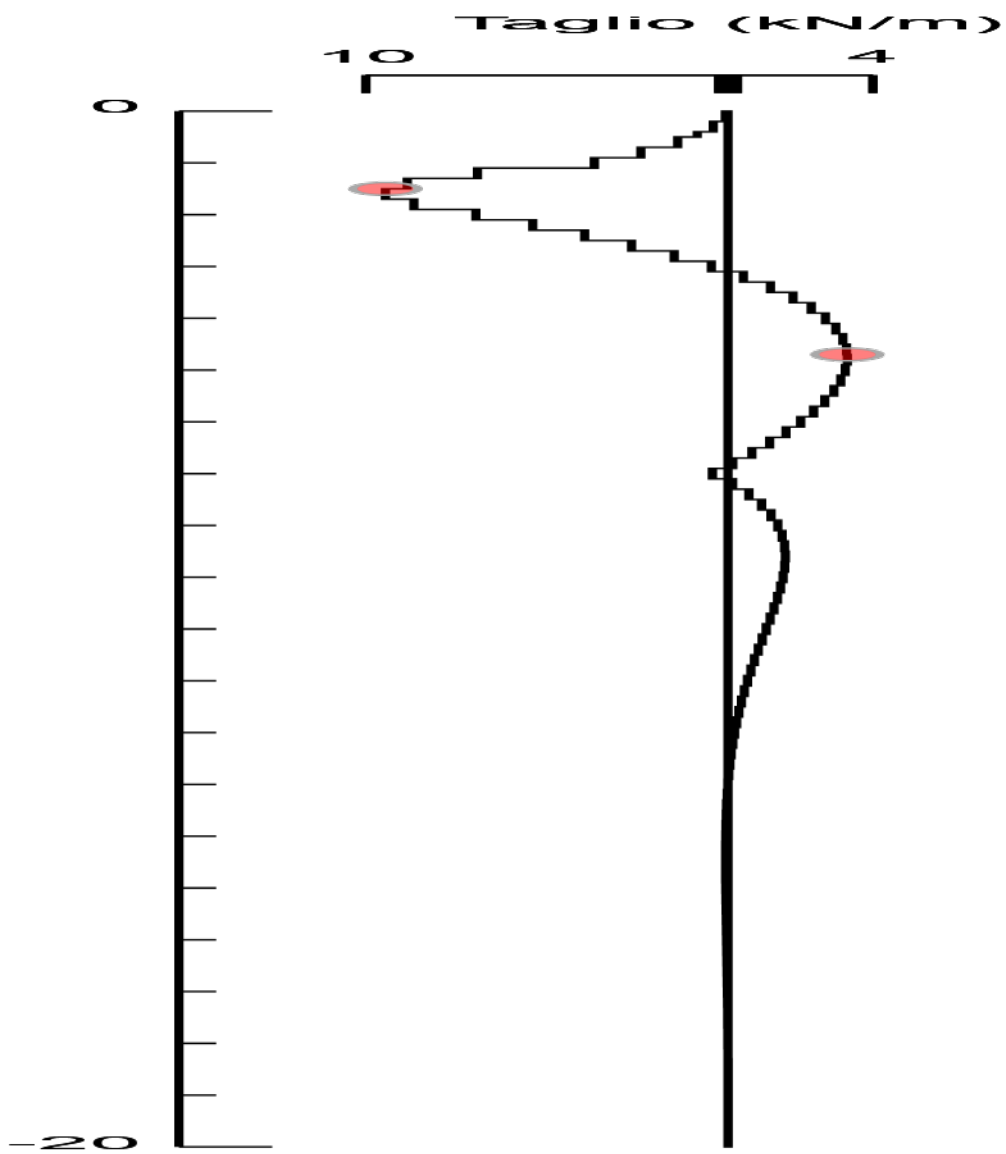
Design Assumption: Nominal
Stage: Stage 1
Paratia: WallElement

5.3.14. Grafico Taglio Nominal - Stage: Stage 2



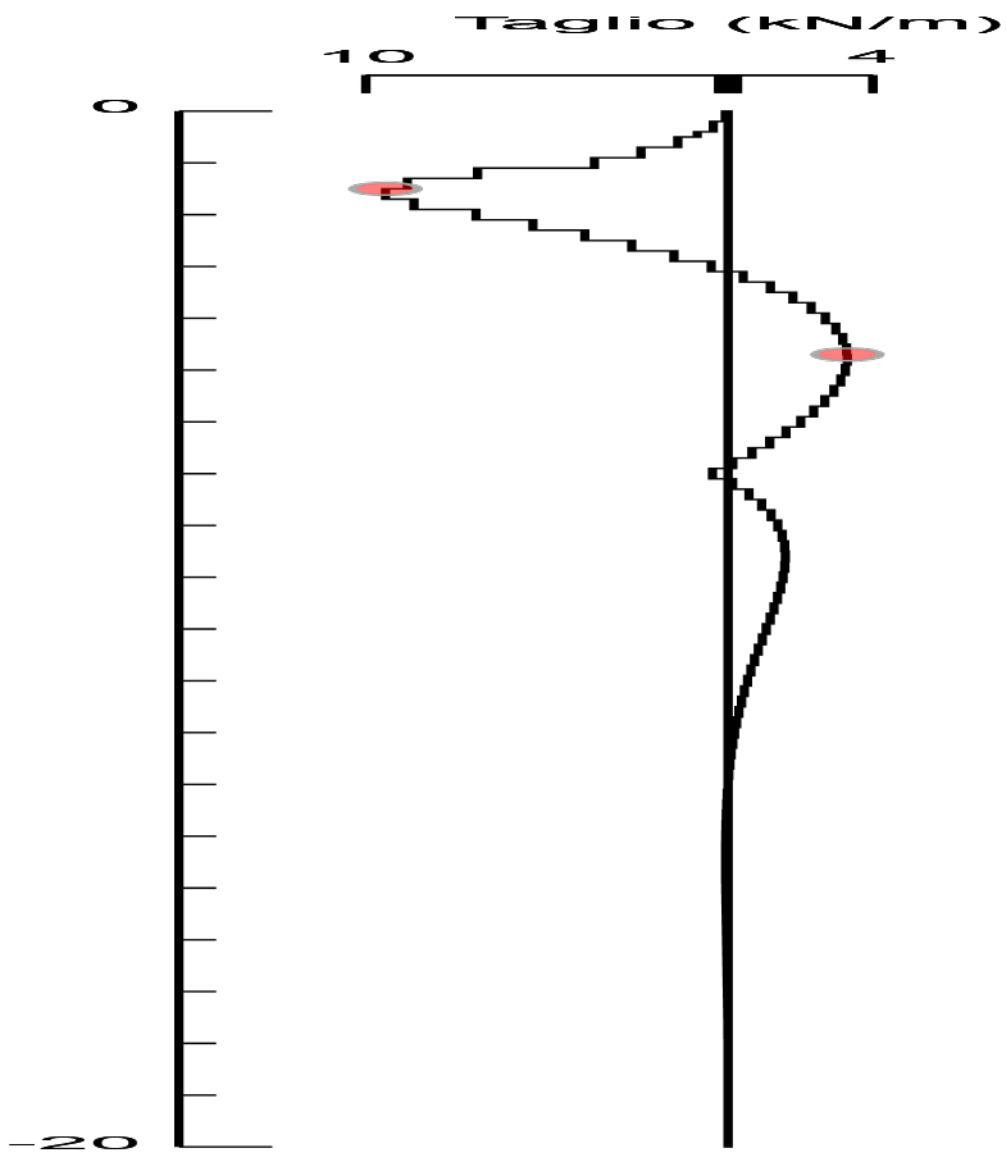
Design Assumption: Nominal
Stage: Stage 2
Paratia: WallElement

5.3.15. Grafico Taglio Nominal - Stage: Stage 3



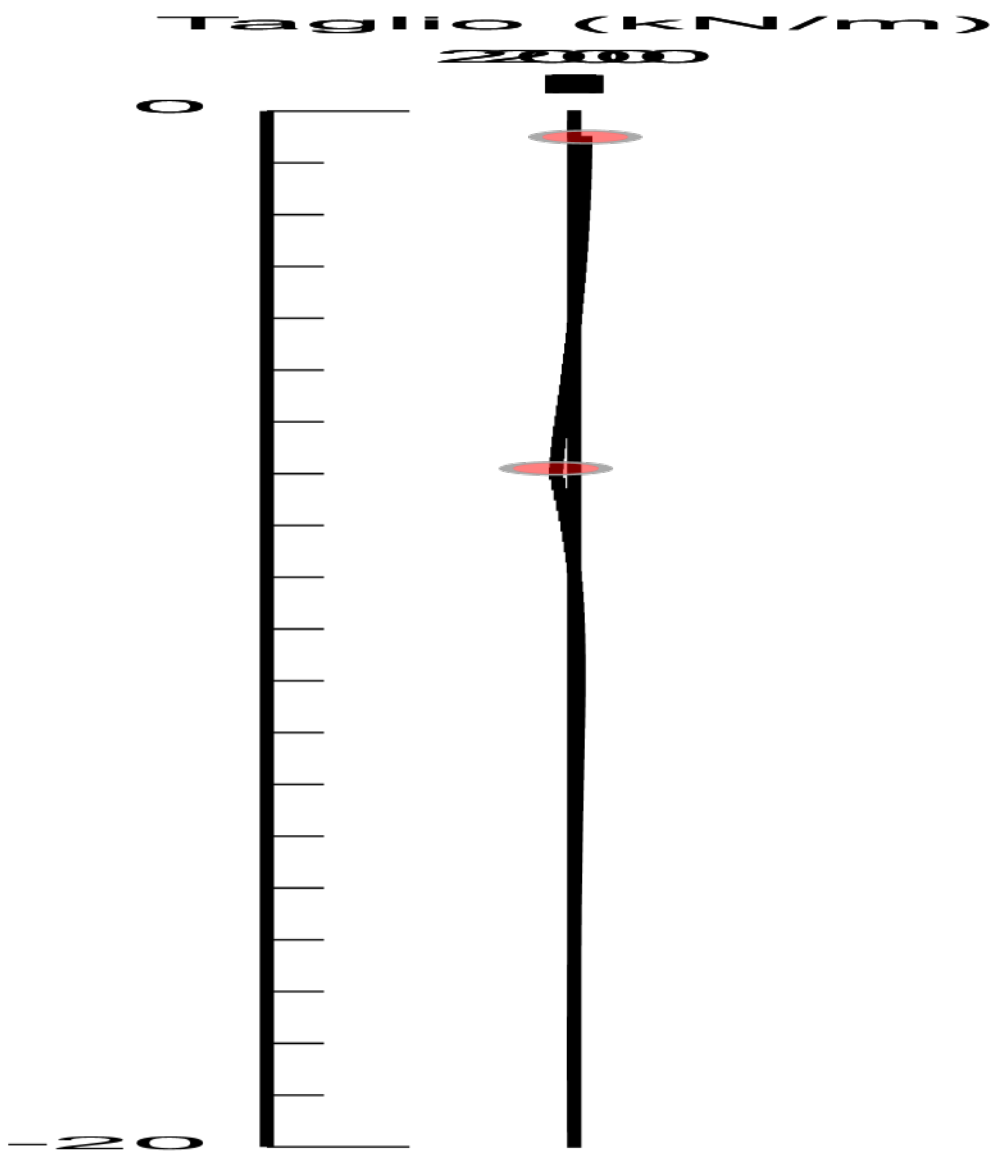
Design Assumption: Nominal
Stage: Stage 3
Paratia: WallElement

5.3.16. Grafico Taglio Nominal - Stage: Stage 4



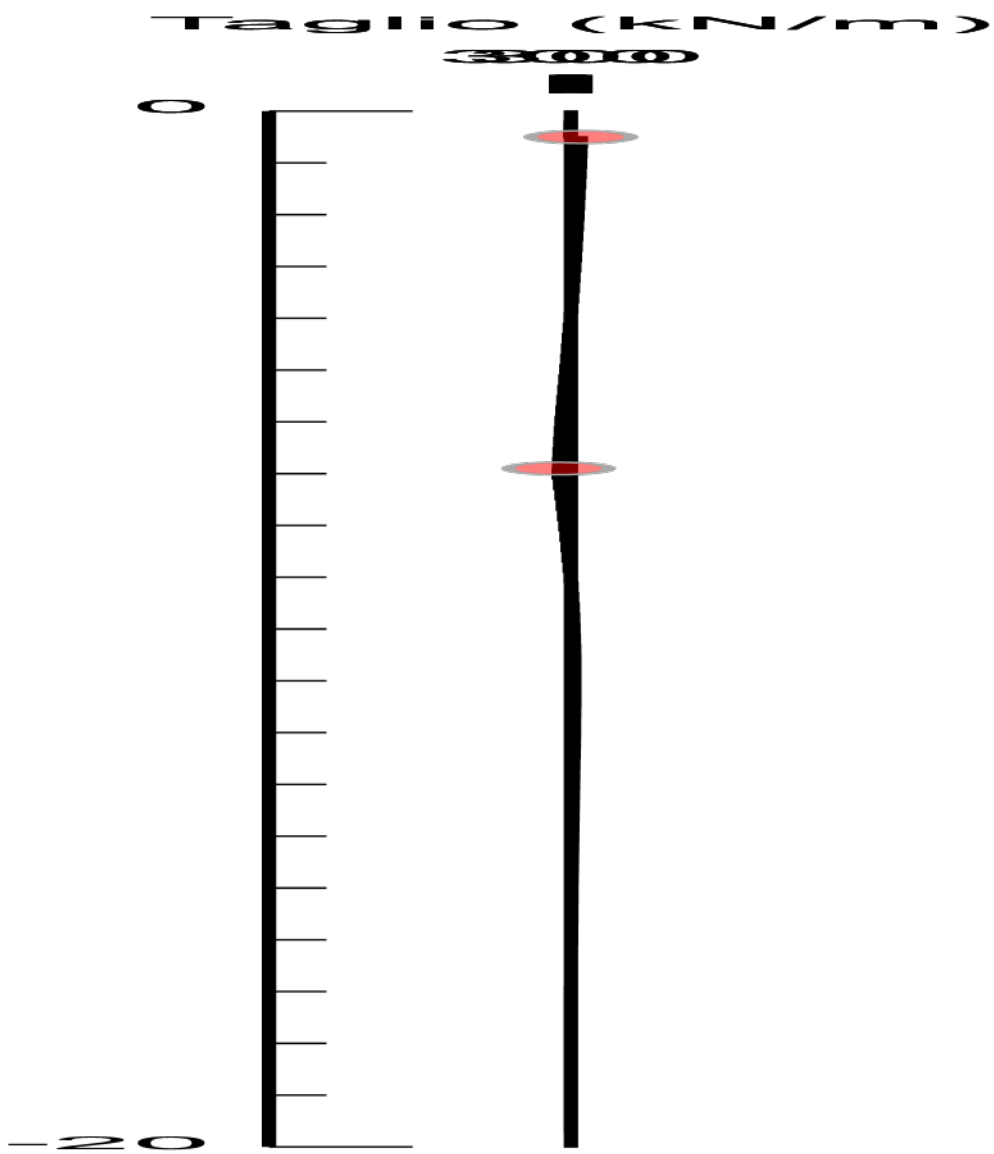
Design Assumption: Nominal
Stage: Stage 4
Paratia: WallElement

5.3.17. Grafico Taglio Nominal - Stage: Stage 5



Design Assumption: Nominal
Stage: Stage 5
Paratia: WallElement

5.3.18. Grafico Taglio Nominal - Stage: Stage 6



Design Assumption: Nominal
Stage: Stage 6
Paratia: WallElement

5.4. Involuppi Risultati Paratia Nominal

5.5. Risultati Terreno

5.5.1. Tabella Risultati Terreno Left Wall - Nominal - Stage 1

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Sigma V (kPa)	Muro: LEFT	Lato LEFT	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 1	0	2.778	0	V-C	0.2716.522	0	0	0	0	0	0
Stage 1	-0.2	6.139	8.805	V-C	0.2716.522	0	0	0	0	0	8.805
Stage 1	-0.4	10.884	15.083	V-C	0.2716.522	0	0	0	0	0	15.083
Stage 1	-0.5	13.267	17.851	V-C	0.2716.522	0	0	0	0	0	17.851
Stage 1	-0.7	18.761	22.868	V-C	0.2716.522	0	0	0	0	0	22.868
Stage 1	-0.9	23.704	27.364	V-C	0.2716.522	0	0	0	0	0	27.364
Stage 1	-1.1	29.257	31.113	V-C	0.4722.728	0	0	0	0	0	31.113
Stage 1	-1.3	34.102	34.792	V-C	0.4722.728	0	0	0	0	0	34.792
Stage 1	-1.5	39.629	38.209	V-C	0.4722.728	0	0	0	0	0	38.209
Stage 1	-1.7	44.456	41.404	V-C	0.4722.728	0	0	0	0	0	41.404
Stage 1	-1.9	49.982	44.409	V-C	0.4722.728	0	0	0	0	0	44.409
Stage 1	-2.1	54.782	47.249	V-C	0.4722.728	0	0	0	0	0	47.249
Stage 1	-2.3	60.295	49.944	V-C	0.4722.728	0	0	0	0	0	49.944
Stage 1	-2.5	65.036	52.512	V-C	0.4722.728	0	0	0	0	0	52.512
Stage 1	-2.7	70.555	54.967	V-C	0.4722.728	0	0	0	0	0	54.967
Stage 1	-2.9	75.263	57.321	V-C	0.4722.728	0	0	0	0	0	57.321
Stage 1	-3.1	80.755	59.586	V-C	0.4722.728	0	0	0	0	0	59.586
Stage 1	-3.3	85.428	61.77	V-C	0.4722.728	0	0	0	0	0	61.77
Stage 1	-3.5	90.864	63.882	V-C	0.4722.728	0	0	0	0	0	63.882
Stage 1	-3.7	95.526	65.931	V-C	0.4722.728	0	0	0	0	0	65.931
Stage 1	-3.9	100.85	67.921	V-C	0.4722.728	0	0	0	0	0	67.921
Stage 1	-4.1	105.554	69.859	V-C	0.4722.728	0	0	0	0	0	69.859
Stage 1	-4.3	110.765	71.751	V-C	0.4722.728	0	0	0	0	0	71.751
Stage 1	-4.5	115.512	73.6	V-C	0.4722.728	0	0	0	0	0	73.6
Stage 1	-4.7	120.609	75.412	V-C	0.4722.728	0	0	0	0	0	75.412
Stage 1	-4.9	125.371	77.19	V-C	0.4722.728	0	0	0	0	0	77.19
Stage 1	-5.1	130.382	78.937	V-C	0.4722.728	0	0	0	0	0	78.937
Stage 1	-5.3	135.187	80.656	V-C	0.4722.728	0	0	0	0	0	80.656
Stage 1	-5.5	140.084	82.351	V-C	0.4722.728	0	0	0	0	0	82.351
Stage 1	-5.7	144.935	84.024	V-C	0.4722.728	0	0	0	0	0	84.024
Stage 1	-5.9	149.719	85.676	V-C	0.4722.728	0	0	0	0	0	85.676
Stage 1	-6.1	154.616	87.311	V-C	0.4722.728	0	0	0	0	0	87.311
Stage 1	-6.3	159.288	88.93	V-C	0.4722.728	0	0	0	0	0	88.93
Stage 1	-6.5	164.233	90.535	V-C	0.4722.728	0	0	0	0	0	90.535
Stage 1	-6.7	168.793	92.127	V-C	0.4722.728	0	0	0	0	0	92.127
Stage 1	-6.9	173.788	93.708	V-C	0.4722.728	0	0	0	0	0	93.708
Stage 1	-7.1	177.238	89.981	V-C	0.3334.639	50	1	0	0	0	90.981
Stage 1	-7.3	179.024	90.536	V-C	0.3334.639	50	3	0	0	0	93.536
Stage 1	-7.5	180.826	91.084	V-C	0.3334.639	50	5	0	0	0	96.084
Stage 1	-7.7	182.643	91.625	V-C	0.3334.639	50	7	0	0	0	98.625
Stage 1	-7.9	184.472	92.161	V-C	0.3334.639	50	9	0	0	0	101.16
Stage 1	-8.1	186.313	92.691	V-C	0.3334.639	50	11	0	0	0	103.691
Stage 1	-8.3	188.164	93.217	V-C	0.3334.639	50	13	0	0	0	106.217
Stage 1	-8.5	190.024	93.739	V-C	0.3334.639	50	15	0	0	0	108.739
Stage 1	-8.7	191.892	94.258	V-C	0.3334.639	50	17	0	0	0	111.258
Stage 1	-8.9	193.767	94.775	V-C	0.3334.639	50	19	0	0	0	113.775
Stage 1	-9.1	195.649	95.29	V-C	0.3334.639	50	21	0	0	0	116.29
Stage 1	-9.3	197.647	95.804	V-C	0.3334.639	50	23	0	0	0	118.804
Stage 1	-9.5	199.972	96.316	V-C	0.3334.639	50	25	0	0	0	121.316
Stage 1	-9.7	202.283	96.828	V-C	0.3334.639	50	27	0	0	0	123.828
Stage 1	-9.9	205.482	97.34	V-C	0.3334.639	50	29	0	0	0	126.34
Stage 1	-10.1	207.749	97.851	V-C	0.3334.639	50	31	0	0	0	128.851
Stage 1	-10.3	210.005	98.363	V-C	0.3334.639	50	33	0	0	0	131.363
Stage 1	-10.5	212.25	98.876	V-C	0.3334.639	50	35	0	0	0	133.876
Stage 1	-10.7	214.484	99.39	V-C	0.3334.639	50	37	0	0	0	136.39
Stage 1	-10.9	216.708	99.905	V-C	0.3334.639	50	39	0	0	0	138.904
Stage 1	-11.1	218.923	100.421	V-C	0.3334.639	50	41	0	0	0	141.421
Stage 1	-11.3	221.129	100.938	V-C	0.3334.639	50	43	0	0	0	143.938
Stage 1	-11.5	223.325	101.458	V-C	0.3334.639	50	45	0	0	0	146.458
Stage 1	-11.7	226.278	101.979	V-C	0.3334.639	50	47	0	0	0	148.979
Stage 1	-11.9	228.446	102.503	V-C	0.3334.639	50	49	0	0	0	151.503
Stage 1	-12.1	230.607	103.028	V-C	0.3334.639	50	51	0	0	0	154.028
Stage 1	-12.3	232.761	103.556	V-C	0.3334.639	50	53	0	0	0	156.556
Stage 1	-12.5	234.908	104.087	V-C	0.3334.639	50	55	0	0	0	159.086

Design Assumption: Nominal Risultati Terreno										
Stage	Z (m)	Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT Stato	Lato Ka	LEFT Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 1	-12.7	237.048	104.619	V-C	0.3334.639	50	57	0	0	161.619
Stage 1	-12.9	239.183	105.155	V-C	0.3334.639	50	59	0	0	164.155
Stage 1	-13.1	241.311	105.693	V-C	0.3334.639	50	61	0	0	166.693
Stage 1	-13.3	243.434	106.234	V-C	0.3334.639	50	63	0	0	169.234
Stage 1	-13.5	246.214	106.778	V-C	0.3334.639	50	65	0	0	171.777
Stage 1	-13.7	248.316	107.324	V-C	0.3334.639	50	67	0	0	174.324
Stage 1	-13.9	250.414	107.874	V-C	0.3334.639	50	69	0	0	176.873
Stage 1	-14.1	252.507	108.426	V-C	0.3334.639	50	71	0	0	179.426
Stage 1	-14.3	254.596	108.981	V-C	0.3334.639	50	73	0	0	181.981
Stage 1	-14.5	256.68	109.54	V-C	0.3334.639	50	75	0	0	184.54
Stage 1	-14.7	258.76	110.101	V-C	0.3334.639	50	77	0	0	187.101
Stage 1	-14.9	260.836	110.666	V-C	0.3334.639	50	79	0	0	189.666
Stage 1	-15.1	262.908	111.234	V-C	0.3334.639	50	81	0	0	192.234
Stage 1	-15.3	265.561	111.805	V-C	0.3334.639	50	83	0	0	194.804
Stage 1	-15.5	267.618	112.379	V-C	0.3334.639	50	85	0	0	197.378
Stage 1	-15.7	269.672	112.956	V-C	0.3334.639	50	87	0	0	199.956
Stage 1	-15.9	271.722	113.536	V-C	0.3334.639	50	89	0	0	202.536
Stage 1	-16.1	273.77	114.119	V-C	0.3334.639	50	91	0	0	205.119
Stage 1	-16.3	275.814	114.706	V-C	0.3334.639	50	93	0	0	207.706
Stage 1	-16.5	277.855	115.296	V-C	0.3334.639	50	95	0	0	210.295
Stage 1	-16.7	279.894	115.888	V-C	0.3334.639	50	97	0	0	212.888
Stage 1	-16.9	281.929	116.484	V-C	0.3334.639	50	99	0	0	215.484
Stage 1	-17.1	284.486	117.083	V-C	0.3334.639	50	101	0	0	218.083
Stage 1	-17.3	286.51	117.685	V-C	0.3334.639	50	103	0	0	220.685
Stage 1	-17.5	288.532	118.29	V-C	0.3334.639	50	105	0	0	223.29
Stage 1	-17.7	290.552	118.898	V-C	0.3334.639	50	107	0	0	225.898
Stage 1	-17.9	292.57	119.51	V-C	0.3334.639	50	109	0	0	228.51
Stage 1	-18.1	294.585	120.124	V-C	0.3334.639	50	111	0	0	231.124
Stage 1	-18.3	296.598	120.741	V-C	0.3334.639	50	113	0	0	233.741
Stage 1	-18.5	298.608	121.361	V-C	0.3334.639	50	115	0	0	236.361
Stage 1	-18.7	300.617	121.984	V-C	0.3334.639	50	117	0	0	238.984
Stage 1	-18.9	303.098	122.61	V-C	0.3334.639	50	119	0	0	241.61
Stage 1	-19.1	305.098	123.24	V-C	0.3334.639	50	121	0	0	244.24
Stage 1	-19.3	307.097	123.871	V-C	0.3334.639	50	123	0	0	246.871
Stage 1	-19.5	309.094	124.506	V-C	0.3334.639	50	125	0	0	249.506
Stage 1	-19.7	311.088	125.143	V-C	0.3334.639	50	127	0	0	252.143
Stage 1	-19.9	313.082	125.784	V-C	0.3334.639	50	129	0	0	254.784
Stage 1	-20	314.302	126.105	V-C	0.3334.639	50	130	0	0	256.105

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	RIGHT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 1	0	0	0	V-C	0.2716.522	0	0	0	0	0
Stage 1	-0.2	4	8.805	V-C	0.2716.522	0	0	0	0	8.805
Stage 1	-0.4	8	15.083	V-C	0.2716.522	0	0	0	0	15.083
Stage 1	-0.5	10	17.851	V-C	0.2716.522	0	0	0	0	17.851
Stage 1	-0.7	14	22.868	V-C	0.2716.522	0	0	0	0	22.868
Stage 1	-0.9	18	27.364	V-C	0.2716.522	0	0	0	0	27.364
Stage 1	-1.1	21.95	31.113	V-C	0.4722.728	0	0	0	0	31.113
Stage 1	-1.3	25.85	34.792	V-C	0.4722.728	0	0	0	0	34.792
Stage 1	-1.5	29.75	38.209	V-C	0.4722.728	0	0	0	0	38.209
Stage 1	-1.7	33.65	41.404	V-C	0.4722.728	0	0	0	0	41.404
Stage 1	-1.9	37.55	44.409	V-C	0.4722.728	0	0	0	0	44.409
Stage 1	-2.1	41.45	47.249	V-C	0.4722.728	0	0	0	0	47.249
Stage 1	-2.3	45.35	49.944	V-C	0.4722.728	0	0	0	0	49.944
Stage 1	-2.5	49.25	52.512	V-C	0.4722.728	0	0	0	0	52.512
Stage 1	-2.7	53.15	54.967	V-C	0.4722.728	0	0	0	0	54.967
Stage 1	-2.9	57.05	57.321	V-C	0.4722.728	0	0	0	0	57.321
Stage 1	-3.1	60.95	59.586	V-C	0.4722.728	0	0	0	0	59.586
Stage 1	-3.3	64.85	61.77	V-C	0.4722.728	0	0	0	0	61.77
Stage 1	-3.5	68.75	63.882	V-C	0.4722.728	0	0	0	0	63.882
Stage 1	-3.7	72.65	65.931	V-C	0.4722.728	0	0	0	0	65.931
Stage 1	-3.9	76.55	67.921	V-C	0.4722.728	0	0	0	0	67.921
Stage 1	-4.1	80.45	69.859	V-C	0.4722.728	0	0	0	0	69.859
Stage 1	-4.3	84.35	71.751	V-C	0.4722.728	0	0	0	0	71.751
Stage 1	-4.5	88.25	73.6	V-C	0.4722.728	0	0	0	0	73.6
Stage 1	-4.7	92.15	75.412	V-C	0.4722.728	0	0	0	0	75.412
Stage 1	-4.9	96.05	77.19	V-C	0.4722.728	0	0	0	0	77.19
Stage 1	-5.1	99.95	78.937	V-C	0.4722.728	0	0	0	0	78.937
Stage 1	-5.3	103.85	80.656	V-C	0.4722.728	0	0	0	0	80.656
Stage 1	-5.5	107.75	82.351	V-C	0.4722.728	0	0	0	0	82.351
Stage 1	-5.7	111.65	84.024	V-C	0.4722.728	0	0	0	0	84.024
Stage 1	-5.9	115.55	85.676	V-C	0.4722.728	0	0	0	0	85.676
Stage 1	-6.1	119.45	87.311	V-C	0.4722.728	0	0	0	0	87.311
Stage 1	-6.3	123.35	88.93	V-C	0.4722.728	0	0	0	0	88.93
Stage 1	-6.5	127.25	90.535	V-C	0.4722.728	0	0	0	0	90.535
Stage 1	-6.7	131.15	92.127	V-C	0.4722.728	0	0	0	0	92.127
Stage 1	-6.9	135.05	93.708	V-C	0.4722.728	0	0	0	0	93.708
Stage 1	-7.1	137.95	89.981	V-C	0.3334.639	50	1	0	0	90.981
Stage 1	-7.3	139.85	90.536	V-C	0.3334.639	50	3	0	0	93.536
Stage 1	-7.5	141.75	91.084	V-C	0.3334.639	50	5	0	0	96.084
Stage 1	-7.7	143.65	91.625	V-C	0.3334.639	50	7	0	0	98.625
Stage 1	-7.9	145.55	92.161	V-C	0.3334.639	50	9	0	0	101.16
Stage 1	-8.1	147.45	92.691	V-C	0.3334.639	50	11	0	0	103.691
Stage 1	-8.3	149.35	93.217	V-C	0.3334.639	50	13	0	0	106.217
Stage 1	-8.5	151.25	93.739	V-C	0.3334.639	50	15	0	0	108.739
Stage 1	-8.7	153.15	94.258	V-C	0.3334.639	50	17	0	0	111.258
Stage 1	-8.9	155.05	94.775	V-C	0.3334.639	50	19	0	0	113.775
Stage 1	-9.1	156.95	95.29	V-C	0.3334.639	50	21	0	0	116.29
Stage 1	-9.3	158.85	95.804	V-C	0.3334.639	50	23	0	0	118.804
Stage 1	-9.5	160.75	96.316	V-C	0.3334.639	50	25	0	0	121.316
Stage 1	-9.7	162.65	96.828	V-C	0.3334.639	50	27	0	0	123.828
Stage 1	-9.9	164.55	97.34	V-C	0.3334.639	50	29	0	0	126.34
Stage 1	-10.1	166.45	97.851	V-C	0.3334.639	50	31	0	0	128.851
Stage 1	-10.3	168.35	98.363	V-C	0.3334.639	50	33	0	0	131.363
Stage 1	-10.5	170.25	98.876	V-C	0.3334.639	50	35	0	0	133.876
Stage 1	-10.7	172.15	99.39	V-C	0.3334.639	50	37	0	0	136.39
Stage 1	-10.9	174.05	99.905	V-C	0.3334.639	50	39	0	0	138.904
Stage 1	-11.1	175.95	100.421	V-C	0.3334.639	50	41	0	0	141.421
Stage 1	-11.3	177.85	100.938	V-C	0.3334.639	50	43	0	0	143.938
Stage 1	-11.5	179.75	101.458	V-C	0.3334.639	50	45	0	0	146.458
Stage 1	-11.7	181.65	101.979	V-C	0.3334.639	50	47	0	0	148.979
Stage 1	-11.9	183.55	102.503	V-C	0.3334.639	50	49	0	0	151.503
Stage 1	-12.1	185.45	103.028	V-C	0.3334.639	50	51	0	0	154.028
Stage 1	-12.3	187.35	103.556	V-C	0.3334.639	50	53	0	0	156.556
Stage 1	-12.5	189.25	104.087	V-C	0.3334.639	50	55	0	0	159.086
Stage 1	-12.7	191.15	104.619	V-C	0.3334.639	50	57	0	0	161.619
Stage 1	-12.9	193.05	105.155	V-C	0.3334.639	50	59	0	0	164.155
Stage 1	-13.1	194.95	105.693	V-C	0.3334.639	50	61	0	0	166.693
Stage 1	-13.3	196.85	106.234	V-C	0.3334.639	50	63	0	0	169.234
Stage 1	-13.5	198.75	106.778	V-C	0.3334.639	50	65	0	0	171.777
Stage 1	-13.7	200.65	107.324	V-C	0.3334.639	50	67	0	0	174.324

Design Assumption: Nominal Risultati Terreno										
Stage	Z (m)	Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato	RIGHT				
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 1	-13.9	202.55	107.874	V-C	0.3334.639	50	69	0	0	176.873
Stage 1	-14.1	204.45	108.426	V-C	0.3334.639	50	71	0	0	179.426
Stage 1	-14.3	206.35	108.981	V-C	0.3334.639	50	73	0	0	181.981
Stage 1	-14.5	208.25	109.54	V-C	0.3334.639	50	75	0	0	184.54
Stage 1	-14.7	210.15	110.101	V-C	0.3334.639	50	77	0	0	187.101
Stage 1	-14.9	212.05	110.666	V-C	0.3334.639	50	79	0	0	189.666
Stage 1	-15.1	213.95	111.234	V-C	0.3334.639	50	81	0	0	192.234
Stage 1	-15.3	215.85	111.805	V-C	0.3334.639	50	83	0	0	194.804
Stage 1	-15.5	217.75	112.379	V-C	0.3334.639	50	85	0	0	197.378
Stage 1	-15.7	219.65	112.956	V-C	0.3334.639	50	87	0	0	199.956
Stage 1	-15.9	221.55	113.536	V-C	0.3334.639	50	89	0	0	202.536
Stage 1	-16.1	223.45	114.119	V-C	0.3334.639	50	91	0	0	205.119
Stage 1	-16.3	225.35	114.706	V-C	0.3334.639	50	93	0	0	207.706
Stage 1	-16.5	227.25	115.296	V-C	0.3334.639	50	95	0	0	210.295
Stage 1	-16.7	229.15	115.888	V-C	0.3334.639	50	97	0	0	212.888
Stage 1	-16.9	231.05	116.484	V-C	0.3334.639	50	99	0	0	215.484
Stage 1	-17.1	232.95	117.083	V-C	0.3334.639	50	101	0	0	218.083
Stage 1	-17.3	234.85	117.685	V-C	0.3334.639	50	103	0	0	220.685
Stage 1	-17.5	236.75	118.29	V-C	0.3334.639	50	105	0	0	223.29
Stage 1	-17.7	238.65	118.898	V-C	0.3334.639	50	107	0	0	225.898
Stage 1	-17.9	240.55	119.51	V-C	0.3334.639	50	109	0	0	228.51
Stage 1	-18.1	242.45	120.124	V-C	0.3334.639	50	111	0	0	231.124
Stage 1	-18.3	244.35	120.741	V-C	0.3334.639	50	113	0	0	233.741
Stage 1	-18.5	246.25	121.361	V-C	0.3334.639	50	115	0	0	236.361
Stage 1	-18.7	248.15	121.984	V-C	0.3334.639	50	117	0	0	238.984
Stage 1	-18.9	250.05	122.61	V-C	0.3334.639	50	119	0	0	241.61
Stage 1	-19.1	251.95	123.24	V-C	0.3334.639	50	121	0	0	244.24
Stage 1	-19.3	253.85	123.871	V-C	0.3334.639	50	123	0	0	246.871
Stage 1	-19.5	255.75	124.506	V-C	0.3334.639	50	125	0	0	249.506
Stage 1	-19.7	257.65	125.143	V-C	0.3334.639	50	127	0	0	252.143
Stage 1	-19.9	259.55	125.784	V-C	0.3334.639	50	129	0	0	254.784
Stage 1	-20	260.5	126.105	V-C	0.3334.639	50	130	0	0	256.105

5.5.2. Tabella Risultati Terreno Left Wall - Nominal - Stage 2

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	LEFT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 2	0	2.778	0.753	ACTIVE	0.271	6.522	0	0	0	0.753
Stage 2	-0.2	6.139	8.742	UL-RL	0.271	6.522	0	0	0	8.742
Stage 2	-0.4	10.884	15.026	UL-RL	0.271	6.522	0	0	0	15.026
Stage 2	-0.5	13.267	17.797	UL-RL	0.271	6.522	0	0	0	17.797
Stage 2	-0.7	18.761	22.819	UL-RL	0.271	6.522	0	0	0	22.819
Stage 2	-0.9	23.704	27.321	UL-RL	0.271	6.522	0	0	0	27.321
Stage 2	-1.1	29.257	31.101	UL-RL	0.472	2.728	0	0	0	31.101
Stage 2	-1.3	34.102	34.781	UL-RL	0.472	2.728	0	0	0	34.781
Stage 2	-1.5	39.629	38.2	UL-RL	0.472	2.728	0	0	0	38.2
Stage 2	-1.7	44.456	41.396	UL-RL	0.472	2.728	0	0	0	41.396
Stage 2	-1.9	49.982	44.402	UL-RL	0.472	2.728	0	0	0	44.402
Stage 2	-2.1	54.782	47.243	UL-RL	0.472	2.728	0	0	0	47.243
Stage 2	-2.3	60.295	49.94	UL-RL	0.472	2.728	0	0	0	49.94
Stage 2	-2.5	65.036	52.508	UL-RL	0.472	2.728	0	0	0	52.508
Stage 2	-2.7	70.555	54.964	UL-RL	0.472	2.728	0	0	0	54.964
Stage 2	-2.9	75.263	57.319	UL-RL	0.472	2.728	0	0	0	57.319
Stage 2	-3.1	80.755	59.584	UL-RL	0.472	2.728	0	0	0	59.584
Stage 2	-3.3	85.428	61.769	UL-RL	0.472	2.728	0	0	0	61.769
Stage 2	-3.5	90.864	63.882	UL-RL	0.472	2.728	0	0	0	63.882
Stage 2	-3.7	95.526	65.93	UL-RL	0.472	2.728	0	0	0	65.93
Stage 2	-3.9	100.85	67.921	UL-RL	0.472	2.728	0	0	0	67.921
Stage 2	-4.1	105.554	69.859	V-C	0.472	2.728	0	0	0	69.859
Stage 2	-4.3	110.765	71.751	V-C	0.472	2.728	0	0	0	71.751
Stage 2	-4.5	115.512	73.601	V-C	0.472	2.728	0	0	0	73.601
Stage 2	-4.7	120.609	75.413	V-C	0.472	2.728	0	0	0	75.413
Stage 2	-4.9	125.371	77.19	V-C	0.472	2.728	0	0	0	77.19
Stage 2	-5.1	130.382	78.937	V-C	0.472	2.728	0	0	0	78.937
Stage 2	-5.3	135.187	80.657	V-C	0.472	2.728	0	0	0	80.657
Stage 2	-5.5	140.084	82.352	V-C	0.472	2.728	0	0	0	82.352
Stage 2	-5.7	144.935	84.024	V-C	0.472	2.728	0	0	0	84.024
Stage 2	-5.9	149.719	85.677	V-C	0.472	2.728	0	0	0	85.677
Stage 2	-6.1	154.616	87.312	V-C	0.472	2.728	0	0	0	87.312
Stage 2	-6.3	159.288	88.931	V-C	0.472	2.728	0	0	0	88.931
Stage 2	-6.5	164.233	90.536	V-C	0.472	2.728	0	0	0	90.536
Stage 2	-6.7	168.793	92.128	V-C	0.472	2.728	0	0	0	92.128
Stage 2	-6.9	173.788	93.709	V-C	0.472	2.728	0	0	0	93.709
Stage 2	-7.1	177.238	89.983	V-C	0.333	4.639	50	1	0	90.983
Stage 2	-7.3	179.024	90.539	V-C	0.333	4.639	50	3	0	93.539
Stage 2	-7.5	180.826	91.086	V-C	0.333	4.639	50	5	0	96.086
Stage 2	-7.7	182.643	91.627	V-C	0.333	4.639	50	7	0	98.627
Stage 2	-7.9	184.472	92.162	V-C	0.333	4.639	50	9	0	101.162
Stage 2	-8.1	186.313	92.692	V-C	0.333	4.639	50	11	0	103.692
Stage 2	-8.3	188.164	93.218	V-C	0.333	4.639	50	13	0	106.218
Stage 2	-8.5	190.024	93.74	V-C	0.333	4.639	50	15	0	108.74
Stage 2	-8.7	191.892	94.259	V-C	0.333	4.639	50	17	0	111.259
Stage 2	-8.9	193.767	94.776	V-C	0.333	4.639	50	19	0	113.776
Stage 2	-9.1	195.649	95.291	V-C	0.333	4.639	50	21	0	116.291
Stage 2	-9.3	197.647	95.804	V-C	0.333	4.639	50	23	0	118.804
Stage 2	-9.5	199.972	96.316	V-C	0.333	4.639	50	25	0	121.316
Stage 2	-9.7	202.283	96.828	V-C	0.333	4.639	50	27	0	123.828
Stage 2	-9.9	205.482	97.34	V-C	0.333	4.639	50	29	0	126.34
Stage 2	-10.1	207.749	97.851	V-C	0.333	4.639	50	31	0	128.851
Stage 2	-10.3	210.005	98.363	V-C	0.333	4.639	50	33	0	131.363
Stage 2	-10.5	212.25	98.876	UL-RL	0.333	4.639	50	35	0	133.876
Stage 2	-10.7	214.484	99.39	UL-RL	0.333	4.639	50	37	0	136.39
Stage 2	-10.9	216.708	99.904	UL-RL	0.333	4.639	50	39	0	138.904
Stage 2	-11.1	218.923	100.42	UL-RL	0.333	4.639	50	41	0	141.42
Stage 2	-11.3	221.129	100.938	UL-RL	0.333	4.639	50	43	0	143.938
Stage 2	-11.5	223.325	101.458	UL-RL	0.333	4.639	50	45	0	146.458
Stage 2	-11.7	226.278	101.979	UL-RL	0.333	4.639	50	47	0	148.979
Stage 2	-11.9	228.446	102.502	UL-RL	0.333	4.639	50	49	0	151.502
Stage 2	-12.1	230.607	103.028	UL-RL	0.333	4.639	50	51	0	154.028
Stage 2	-12.3	232.761	103.556	UL-RL	0.333	4.639	50	53	0	156.556
Stage 2	-12.5	234.908	104.086	UL-RL	0.333	4.639	50	55	0	159.086
Stage 2	-12.7	237.048	104.619	UL-RL	0.333	4.639	50	57	0	161.619
Stage 2	-12.9	239.183	105.155	UL-RL	0.333	4.639	50	59	0	164.154
Stage 2	-13.1	241.311	105.693	UL-RL	0.333	4.639	50	61	0	166.693

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT	Lato		LEFT				
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 2	-13.3	243.434	106.234	UL-RL	0.333	4.639	50	63	0	0	169.234
Stage 2	-13.5	246.214	106.777	UL-RL	0.333	4.639	50	65	0	0	171.777
Stage 2	-13.7	248.316	107.324	UL-RL	0.333	4.639	50	67	0	0	174.324
Stage 2	-13.9	250.414	107.873	UL-RL	0.333	4.639	50	69	0	0	176.873
Stage 2	-14.1	252.507	108.426	UL-RL	0.333	4.639	50	71	0	0	179.426
Stage 2	-14.3	254.596	108.981	UL-RL	0.333	4.639	50	73	0	0	181.981
Stage 2	-14.5	256.68	109.54	UL-RL	0.333	4.639	50	75	0	0	184.54
Stage 2	-14.7	258.76	110.101	UL-RL	0.333	4.639	50	77	0	0	187.101
Stage 2	-14.9	260.836	110.666	UL-RL	0.333	4.639	50	79	0	0	189.666
Stage 2	-15.1	262.908	111.234	UL-RL	0.333	4.639	50	81	0	0	192.234
Stage 2	-15.3	265.561	111.805	UL-RL	0.333	4.639	50	83	0	0	194.804
Stage 2	-15.5	267.618	112.379	UL-RL	0.333	4.639	50	85	0	0	197.378
Stage 2	-15.7	269.672	112.956	UL-RL	0.333	4.639	50	87	0	0	199.956
Stage 2	-15.9	271.722	113.536	UL-RL	0.333	4.639	50	89	0	0	202.536
Stage 2	-16.1	273.77	114.119	UL-RL	0.333	4.639	50	91	0	0	205.119
Stage 2	-16.3	275.814	114.706	UL-RL	0.333	4.639	50	93	0	0	207.706
Stage 2	-16.5	277.855	115.296	UL-RL	0.333	4.639	50	95	0	0	210.295
Stage 2	-16.7	279.894	115.888	V-C	0.333	4.639	50	97	0	0	212.888
Stage 2	-16.9	281.929	116.484	V-C	0.333	4.639	50	99	0	0	215.484
Stage 2	-17.1	284.486	117.083	V-C	0.333	4.639	50	101	0	0	218.083
Stage 2	-17.3	286.51	117.685	V-C	0.333	4.639	50	103	0	0	220.685
Stage 2	-17.5	288.532	118.29	V-C	0.333	4.639	50	105	0	0	223.29
Stage 2	-17.7	290.552	118.898	V-C	0.333	4.639	50	107	0	0	225.898
Stage 2	-17.9	292.57	119.51	V-C	0.333	4.639	50	109	0	0	228.51
Stage 2	-18.1	294.585	120.124	V-C	0.333	4.639	50	111	0	0	231.124
Stage 2	-18.3	296.598	120.741	V-C	0.333	4.639	50	113	0	0	233.741
Stage 2	-18.5	298.608	121.361	V-C	0.333	4.639	50	115	0	0	236.361
Stage 2	-18.7	300.617	121.984	V-C	0.333	4.639	50	117	0	0	238.984
Stage 2	-18.9	303.098	122.61	V-C	0.333	4.639	50	119	0	0	241.61
Stage 2	-19.1	305.098	123.24	V-C	0.333	4.639	50	121	0	0	244.24
Stage 2	-19.3	307.097	123.871	V-C	0.333	4.639	50	123	0	0	246.871
Stage 2	-19.5	309.094	124.506	V-C	0.333	4.639	50	125	0	0	249.506
Stage 2	-19.7	311.088	125.143	V-C	0.333	4.639	50	127	0	0	252.143
Stage 2	-19.9	313.082	125.784	V-C	0.333	4.639	50	129	0	0	254.784
Stage 2	-20	314.302	126.105	V-C	0.333	4.639	50	130	0	0	256.105

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	RIGHT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 2	0	0	0	PASSIVE	0.2716.522		0	0	0	0
Stage 2	-0.2	4	8.826	V-C	0.2716.522		0	0	0	8.826
Stage 2	-0.4	8	15.102	V-C	0.2716.522		0	0	0	15.102
Stage 2	-0.5	10	17.869	V-C	0.2716.522		0	0	0	17.869
Stage 2	-0.7	14	22.884	V-C	0.2716.522		0	0	0	22.884
Stage 2	-0.9	18	27.379	V-C	0.2716.522		0	0	0	27.379
Stage 2	-1.1	21.95	31.12	V-C	0.4722.728		0	0	0	31.12
Stage 2	-1.3	25.85	34.798	V-C	0.4722.728		0	0	0	34.798
Stage 2	-1.5	29.75	38.214	V-C	0.4722.728		0	0	0	38.214
Stage 2	-1.7	33.65	41.409	V-C	0.4722.728		0	0	0	41.409
Stage 2	-1.9	37.55	44.413	V-C	0.4722.728		0	0	0	44.413
Stage 2	-2.1	41.45	47.253	V-C	0.4722.728		0	0	0	47.253
Stage 2	-2.3	45.35	49.947	V-C	0.4722.728		0	0	0	49.947
Stage 2	-2.5	49.25	52.515	V-C	0.4722.728		0	0	0	52.515
Stage 2	-2.7	53.15	54.969	V-C	0.4722.728		0	0	0	54.969
Stage 2	-2.9	57.05	57.322	V-C	0.4722.728		0	0	0	57.322
Stage 2	-3.1	60.95	59.587	V-C	0.4722.728		0	0	0	59.587
Stage 2	-3.3	64.85	61.771	V-C	0.4722.728		0	0	0	61.771
Stage 2	-3.5	68.75	63.883	V-C	0.4722.728		0	0	0	63.883
Stage 2	-3.7	72.65	65.931	V-C	0.4722.728		0	0	0	65.931
Stage 2	-3.9	76.55	67.921	V-C	0.4722.728		0	0	0	67.921
Stage 2	-4.1	80.45	69.859	UL-RL	0.4722.728		0	0	0	69.859
Stage 2	-4.3	84.35	71.75	UL-RL	0.4722.728		0	0	0	71.75
Stage 2	-4.5	88.25	73.6	UL-RL	0.4722.728		0	0	0	73.6
Stage 2	-4.7	92.15	75.411	UL-RL	0.4722.728		0	0	0	75.411
Stage 2	-4.9	96.05	77.189	UL-RL	0.4722.728		0	0	0	77.189
Stage 2	-5.1	99.95	78.936	UL-RL	0.4722.728		0	0	0	78.936
Stage 2	-5.3	103.85	80.655	UL-RL	0.4722.728		0	0	0	80.655
Stage 2	-5.5	107.75	82.35	UL-RL	0.4722.728		0	0	0	82.35
Stage 2	-5.7	111.65	84.022	UL-RL	0.4722.728		0	0	0	84.022
Stage 2	-5.9	115.55	85.675	UL-RL	0.4722.728		0	0	0	85.675
Stage 2	-6.1	119.45	87.31	UL-RL	0.4722.728		0	0	0	87.31
Stage 2	-6.3	123.35	88.929	UL-RL	0.4722.728		0	0	0	88.929
Stage 2	-6.5	127.25	90.534	UL-RL	0.4722.728		0	0	0	90.534
Stage 2	-6.7	131.15	92.126	UL-RL	0.4722.728		0	0	0	92.126
Stage 2	-6.9	135.05	93.707	UL-RL	0.4722.728		0	0	0	93.707
Stage 2	-7.1	137.95	89.978	UL-RL	0.3334.639	50	1	0	0	90.978
Stage 2	-7.3	139.85	90.534	UL-RL	0.3334.639	50	3	0	0	93.534
Stage 2	-7.5	141.75	91.082	UL-RL	0.3334.639	50	5	0	0	96.082
Stage 2	-7.7	143.65	91.623	UL-RL	0.3334.639	50	7	0	0	98.623
Stage 2	-7.9	145.55	92.159	UL-RL	0.3334.639	50	9	0	0	101.159
Stage 2	-8.1	147.45	92.689	UL-RL	0.3334.639	50	11	0	0	103.689
Stage 2	-8.3	149.35	93.215	UL-RL	0.3334.639	50	13	0	0	106.215
Stage 2	-8.5	151.25	93.738	UL-RL	0.3334.639	50	15	0	0	108.738
Stage 2	-8.7	153.15	94.257	UL-RL	0.3334.639	50	17	0	0	111.257
Stage 2	-8.9	155.05	94.774	UL-RL	0.3334.639	50	19	0	0	113.774
Stage 2	-9.1	156.95	95.289	UL-RL	0.3334.639	50	21	0	0	116.289
Stage 2	-9.3	158.85	95.803	UL-RL	0.3334.639	50	23	0	0	118.803
Stage 2	-9.5	160.75	96.316	UL-RL	0.3334.639	50	25	0	0	121.316
Stage 2	-9.7	162.65	96.828	UL-RL	0.3334.639	50	27	0	0	123.828
Stage 2	-9.9	164.55	97.339	UL-RL	0.3334.639	50	29	0	0	126.339
Stage 2	-10.1	166.45	97.851	UL-RL	0.3334.639	50	31	0	0	128.851
Stage 2	-10.3	168.35	98.363	UL-RL	0.3334.639	50	33	0	0	131.363
Stage 2	-10.5	170.25	98.876	V-C	0.3334.639	50	35	0	0	133.876
Stage 2	-10.7	172.15	99.39	V-C	0.3334.639	50	37	0	0	136.39
Stage 2	-10.9	174.05	99.905	V-C	0.3334.639	50	39	0	0	138.904
Stage 2	-11.1	175.95	100.421	V-C	0.3334.639	50	41	0	0	141.421
Stage 2	-11.3	177.85	100.938	V-C	0.3334.639	50	43	0	0	143.938
Stage 2	-11.5	179.75	101.458	V-C	0.3334.639	50	45	0	0	146.458
Stage 2	-11.7	181.65	101.979	V-C	0.3334.639	50	47	0	0	148.979
Stage 2	-11.9	183.55	102.503	V-C	0.3334.639	50	49	0	0	151.503
Stage 2	-12.1	185.45	103.028	V-C	0.3334.639	50	51	0	0	154.028
Stage 2	-12.3	187.35	103.556	V-C	0.3334.639	50	53	0	0	156.556
Stage 2	-12.5	189.25	104.087	V-C	0.3334.639	50	55	0	0	159.087
Stage 2	-12.7	191.15	104.62	V-C	0.3334.639	50	57	0	0	161.619
Stage 2	-12.9	193.05	105.155	V-C	0.3334.639	50	59	0	0	164.155
Stage 2	-13.1	194.95	105.693	V-C	0.3334.639	50	61	0	0	166.693
Stage 2	-13.3	196.85	106.234	V-C	0.3334.639	50	63	0	0	169.234
Stage 2	-13.5	198.75	106.778	V-C	0.3334.639	50	65	0	0	171.778
Stage 2	-13.7	200.65	107.324	V-C	0.3334.639	50	67	0	0	174.324

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Muro:		LEFT	Lato		RIGHT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 2	-13.9	202.55	107.874	V-C	0.3334.639		50	69	0	0	176.874
Stage 2	-14.1	204.45	108.426	V-C	0.3334.639		50	71	0	0	179.426
Stage 2	-14.3	206.35	108.981	V-C	0.3334.639		50	73	0	0	181.981
Stage 2	-14.5	208.25	109.54	V-C	0.3334.639		50	75	0	0	184.54
Stage 2	-14.7	210.15	110.101	V-C	0.3334.639		50	77	0	0	187.101
Stage 2	-14.9	212.05	110.666	V-C	0.3334.639		50	79	0	0	189.666
Stage 2	-15.1	213.95	111.234	V-C	0.3334.639		50	81	0	0	192.234
Stage 2	-15.3	215.85	111.805	V-C	0.3334.639		50	83	0	0	194.804
Stage 2	-15.5	217.75	112.379	V-C	0.3334.639		50	85	0	0	197.378
Stage 2	-15.7	219.65	112.956	V-C	0.3334.639		50	87	0	0	199.956
Stage 2	-15.9	221.55	113.536	V-C	0.3334.639		50	89	0	0	202.536
Stage 2	-16.1	223.45	114.119	V-C	0.3334.639		50	91	0	0	205.119
Stage 2	-16.3	225.35	114.706	V-C	0.3334.639		50	93	0	0	207.706
Stage 2	-16.5	227.25	115.296	V-C	0.3334.639		50	95	0	0	210.295
Stage 2	-16.7	229.15	115.888	UL-RL	0.3334.639		50	97	0	0	212.888
Stage 2	-16.9	231.05	116.484	UL-RL	0.3334.639		50	99	0	0	215.484
Stage 2	-17.1	232.95	117.083	UL-RL	0.3334.639		50	101	0	0	218.083
Stage 2	-17.3	234.85	117.685	UL-RL	0.3334.639		50	103	0	0	220.685
Stage 2	-17.5	236.75	118.29	UL-RL	0.3334.639		50	105	0	0	223.29
Stage 2	-17.7	238.65	118.898	UL-RL	0.3334.639		50	107	0	0	225.898
Stage 2	-17.9	240.55	119.51	UL-RL	0.3334.639		50	109	0	0	228.51
Stage 2	-18.1	242.45	120.124	UL-RL	0.3334.639		50	111	0	0	231.124
Stage 2	-18.3	244.35	120.741	UL-RL	0.3334.639		50	113	0	0	233.741
Stage 2	-18.5	246.25	121.361	UL-RL	0.3334.639		50	115	0	0	236.361
Stage 2	-18.7	248.15	121.984	UL-RL	0.3334.639		50	117	0	0	238.984
Stage 2	-18.9	250.05	122.61	UL-RL	0.3334.639		50	119	0	0	241.61
Stage 2	-19.1	251.95	123.24	UL-RL	0.3334.639		50	121	0	0	244.24
Stage 2	-19.3	253.85	123.871	UL-RL	0.3334.639		50	123	0	0	246.871
Stage 2	-19.5	255.75	124.506	UL-RL	0.3334.639		50	125	0	0	249.506
Stage 2	-19.7	257.65	125.143	UL-RL	0.3334.639		50	127	0	0	252.143
Stage 2	-19.9	259.55	125.784	UL-RL	0.3334.639		50	129	0	0	254.784
Stage 2	-20	260.5	126.105	UL-RL	0.3334.639		50	130	0	0	256.105

5.5.3. Tabella Risultati Terreno Left Wall - Nominal - Stage 3

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	LEFT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 3	0	2.778	0.753	ACTIVE	0.271	6.522	0	0	0	0.753
Stage 3	-0.2	6.139	1.664	ACTIVE	0.271	6.522	0	0	0	1.664
Stage 3	-0.4	10.884	2.95	ACTIVE	0.271	6.522	0	0	0	2.95
Stage 3	-0.5	13.267	3.595	ACTIVE	0.271	6.522	0	0	0	3.595
Stage 3	-0.7	18.761	5.084	ACTIVE	0.271	6.522	0	0	0	5.084
Stage 3	-0.9	23.704	6.424	ACTIVE	0.271	6.522	0	0	0	6.424
Stage 3	-1.1	29.257	21.446	UL-RL	0.472	2.728	0	0	0	21.446
Stage 3	-1.3	34.102	25.659	UL-RL	0.472	2.728	0	0	0	25.659
Stage 3	-1.5	39.629	29.604	UL-RL	0.472	2.728	0	0	0	29.604
Stage 3	-1.7	44.456	33.319	UL-RL	0.472	2.728	0	0	0	33.319
Stage 3	-1.9	49.982	36.831	UL-RL	0.472	2.728	0	0	0	36.831
Stage 3	-2.1	54.782	40.163	UL-RL	0.472	2.728	0	0	0	40.163
Stage 3	-2.3	60.295	43.332	UL-RL	0.472	2.728	0	0	0	43.332
Stage 3	-2.5	65.036	46.353	UL-RL	0.472	2.728	0	0	0	46.353
Stage 3	-2.7	70.555	49.241	UL-RL	0.472	2.728	0	0	0	49.241
Stage 3	-2.9	75.263	52.005	UL-RL	0.472	2.728	0	0	0	52.005
Stage 3	-3.1	80.755	54.657	UL-RL	0.472	2.728	0	0	0	54.657
Stage 3	-3.3	85.428	57.206	UL-RL	0.472	2.728	0	0	0	57.206
Stage 3	-3.5	90.864	59.66	UL-RL	0.472	2.728	0	0	0	59.66
Stage 3	-3.7	95.526	62.027	UL-RL	0.472	2.728	0	0	0	62.027
Stage 3	-3.9	100.85	64.314	UL-RL	0.472	2.728	0	0	0	64.314
Stage 3	-4.1	105.554	66.528	UL-RL	0.472	2.728	0	0	0	66.528
Stage 3	-4.3	110.765	68.676	UL-RL	0.472	2.728	0	0	0	68.676
Stage 3	-4.5	115.512	70.762	UL-RL	0.472	2.728	0	0	0	70.762
Stage 3	-4.7	120.609	72.793	UL-RL	0.472	2.728	0	0	0	72.793
Stage 3	-4.9	125.371	74.774	UL-RL	0.472	2.728	0	0	0	74.774
Stage 3	-5.1	130.382	76.708	UL-RL	0.472	2.728	0	0	0	76.708
Stage 3	-5.3	135.187	78.601	UL-RL	0.472	2.728	0	0	0	78.601
Stage 3	-5.5	140.084	80.455	UL-RL	0.472	2.728	0	0	0	80.455
Stage 3	-5.7	144.935	82.276	UL-RL	0.472	2.728	0	0	0	82.276
Stage 3	-5.9	149.719	84.065	UL-RL	0.472	2.728	0	0	0	84.065
Stage 3	-6.1	154.616	85.827	UL-RL	0.472	2.728	0	0	0	85.827
Stage 3	-6.3	159.288	87.563	UL-RL	0.472	2.728	0	0	0	87.563
Stage 3	-6.5	164.233	89.276	UL-RL	0.472	2.728	0	0	0	89.276
Stage 3	-6.7	168.793	90.968	UL-RL	0.472	2.728	0	0	0	90.968
Stage 3	-6.9	173.788	92.641	UL-RL	0.472	2.728	0	0	0	92.641
Stage 3	-7.1	177.238	85.589	UL-RL	0.333	4.639	50	1	0	86.589
Stage 3	-7.3	179.024	86.48	UL-RL	0.333	4.639	50	3	0	89.48
Stage 3	-7.5	180.826	87.327	UL-RL	0.333	4.639	50	5	0	92.327
Stage 3	-7.7	182.643	88.131	UL-RL	0.333	4.639	50	7	0	95.131
Stage 3	-7.9	184.472	88.895	UL-RL	0.333	4.639	50	9	0	97.895
Stage 3	-8.1	186.313	89.621	UL-RL	0.333	4.639	50	11	0	100.621
Stage 3	-8.3	188.164	90.313	UL-RL	0.333	4.639	50	13	0	103.313
Stage 3	-8.5	190.024	90.973	UL-RL	0.333	4.639	50	15	0	105.973
Stage 3	-8.7	191.892	91.606	UL-RL	0.333	4.639	50	17	0	108.606
Stage 3	-8.9	193.767	92.212	UL-RL	0.333	4.639	50	19	0	111.212
Stage 3	-9.1	195.649	92.797	UL-RL	0.333	4.639	50	21	0	113.797
Stage 3	-9.3	197.647	93.363	UL-RL	0.333	4.639	50	23	0	116.363
Stage 3	-9.5	199.972	93.912	UL-RL	0.333	4.639	50	25	0	118.912
Stage 3	-9.7	202.283	94.448	UL-RL	0.333	4.639	50	27	0	121.448
Stage 3	-9.9	205.482	94.972	UL-RL	0.333	4.639	50	29	0	123.972
Stage 3	-10.1	207.749	95.488	UL-RL	0.333	4.639	50	31	0	126.488
Stage 3	-10.3	210.005	95.996	UL-RL	0.333	4.639	50	33	0	128.996
Stage 3	-10.5	212.25	96.499	UL-RL	0.333	4.639	50	35	0	131.499
Stage 3	-10.7	214.484	96.998	UL-RL	0.333	4.639	50	37	0	133.998
Stage 3	-10.9	216.708	97.495	UL-RL	0.333	4.639	50	39	0	136.495
Stage 3	-11.1	218.923	97.992	UL-RL	0.333	4.639	50	41	0	138.992
Stage 3	-11.3	221.129	98.488	UL-RL	0.333	4.639	50	43	0	141.488
Stage 3	-11.5	223.325	98.986	UL-RL	0.333	4.639	50	45	0	143.986
Stage 3	-11.7	226.278	99.485	UL-RL	0.333	4.639	50	47	0	146.485
Stage 3	-11.9	228.446	99.987	UL-RL	0.333	4.639	50	49	0	148.987
Stage 3	-12.1	230.607	100.492	UL-RL	0.333	4.639	50	51	0	151.491
Stage 3	-12.3	232.761	101	UL-RL	0.333	4.639	50	53	0	154
Stage 3	-12.5	234.908	101.512	UL-RL	0.333	4.639	50	55	0	156.512
Stage 3	-12.7	237.048	102.027	UL-RL	0.333	4.639	50	57	0	159.027
Stage 3	-12.9	239.183	102.547	UL-RL	0.333	4.639	50	59	0	161.547
Stage 3	-13.1	241.311	103.072	UL-RL	0.333	4.639	50	61	0	164.072

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Muro:		LEFT	Lato		LEFT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 3	-13.3	243.434	103.6	UL-RL	0.333	4.639	50	63	0	0	166.6
Stage 3	-13.5	246.214	104.133	UL-RL	0.333	4.639	50	65	0	0	169.133
Stage 3	-13.7	248.316	104.67	UL-RL	0.333	4.639	50	67	0	0	171.67
Stage 3	-13.9	250.414	105.212	UL-RL	0.333	4.639	50	69	0	0	174.212
Stage 3	-14.1	252.507	105.758	UL-RL	0.333	4.639	50	71	0	0	176.758
Stage 3	-14.3	254.596	106.308	UL-RL	0.333	4.639	50	73	0	0	179.308
Stage 3	-14.5	256.68	106.862	UL-RL	0.333	4.639	50	75	0	0	181.862
Stage 3	-14.7	258.76	107.42	UL-RL	0.333	4.639	50	77	0	0	184.42
Stage 3	-14.9	260.836	107.982	UL-RL	0.333	4.639	50	79	0	0	186.982
Stage 3	-15.1	262.908	108.548	UL-RL	0.333	4.639	50	81	0	0	189.548
Stage 3	-15.3	265.561	109.118	UL-RL	0.333	4.639	50	83	0	0	192.118
Stage 3	-15.5	267.618	109.692	UL-RL	0.333	4.639	50	85	0	0	194.692
Stage 3	-15.7	269.672	110.269	UL-RL	0.333	4.639	50	87	0	0	197.269
Stage 3	-15.9	271.722	110.85	UL-RL	0.333	4.639	50	89	0	0	199.849
Stage 3	-16.1	273.77	111.434	UL-RL	0.333	4.639	50	91	0	0	202.434
Stage 3	-16.3	275.814	112.021	UL-RL	0.333	4.639	50	93	0	0	205.021
Stage 3	-16.5	277.855	112.612	UL-RL	0.333	4.639	50	95	0	0	207.612
Stage 3	-16.7	279.894	113.206	UL-RL	0.333	4.639	50	97	0	0	210.206
Stage 3	-16.9	281.929	113.803	UL-RL	0.333	4.639	50	99	0	0	212.803
Stage 3	-17.1	284.486	114.404	UL-RL	0.333	4.639	50	101	0	0	215.404
Stage 3	-17.3	286.51	115.007	UL-RL	0.333	4.639	50	103	0	0	218.007
Stage 3	-17.5	288.532	115.614	UL-RL	0.333	4.639	50	105	0	0	220.614
Stage 3	-17.7	290.552	116.224	UL-RL	0.333	4.639	50	107	0	0	223.224
Stage 3	-17.9	292.57	116.836	UL-RL	0.333	4.639	50	109	0	0	225.836
Stage 3	-18.1	294.585	117.452	UL-RL	0.333	4.639	50	111	0	0	228.452
Stage 3	-18.3	296.598	118.071	UL-RL	0.333	4.639	50	113	0	0	231.071
Stage 3	-18.5	298.608	118.693	UL-RL	0.333	4.639	50	115	0	0	233.693
Stage 3	-18.7	300.617	119.317	UL-RL	0.333	4.639	50	117	0	0	236.317
Stage 3	-18.9	303.098	119.945	UL-RL	0.333	4.639	50	119	0	0	238.945
Stage 3	-19.1	305.098	120.575	UL-RL	0.333	4.639	50	121	0	0	241.575
Stage 3	-19.3	307.097	121.208	UL-RL	0.333	4.639	50	123	0	0	244.208
Stage 3	-19.5	309.094	121.844	UL-RL	0.333	4.639	50	125	0	0	246.844
Stage 3	-19.7	311.088	122.483	UL-RL	0.333	4.639	50	127	0	0	249.483
Stage 3	-19.9	313.082	123.125	UL-RL	0.333	4.639	50	129	0	0	252.125
Stage 3	-20	314.302	123.447	UL-RL	0.333	4.639	50	130	0	0	253.447

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato		RIGHT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 3	0	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.5	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.7	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-0.9	0	0	REMOVED	0	0	0	0	0	0	
Stage 3	-1.1	1.95	5.32	PASSIVE	0.4722.728	0	0	0	0	5.32	
Stage 3	-1.3	5.85	15.959	PASSIVE	0.4722.728	0	0	0	0	15.959	
Stage 3	-1.5	9.75	26.598	PASSIVE	0.4722.728	0	0	0	0	26.598	
Stage 3	-1.7	13.65	37.237	PASSIVE	0.4722.728	0	0	0	0	37.237	
Stage 3	-1.9	17.55	45.394	V-C	0.4722.728	0	0	0	0	45.394	
Stage 3	-2.1	21.45	48.017	V-C	0.4722.728	0	0	0	0	48.017	
Stage 3	-2.3	25.35	50.487	V-C	0.4722.728	0	0	0	0	50.487	
Stage 3	-2.5	29.25	52.831	V-C	0.4722.728	0	0	0	0	52.831	
Stage 3	-2.7	33.15	55.065	V-C	0.4722.728	0	0	0	0	55.065	
Stage 3	-2.9	37.05	57.137	UL-RL	0.4722.728	0	0	0	0	57.137	
Stage 3	-3.1	40.95	59.075	UL-RL	0.4722.728	0	0	0	0	59.075	
Stage 3	-3.3	44.85	60.949	UL-RL	0.4722.728	0	0	0	0	60.949	
Stage 3	-3.5	48.75	62.768	UL-RL	0.4722.728	0	0	0	0	62.768	
Stage 3	-3.7	52.65	64.541	UL-RL	0.4722.728	0	0	0	0	64.541	
Stage 3	-3.9	56.55	66.273	UL-RL	0.4722.728	0	0	0	0	66.273	
Stage 3	-4.1	60.45	67.97	UL-RL	0.4722.728	0	0	0	0	67.97	
Stage 3	-4.3	64.35	69.638	UL-RL	0.4722.728	0	0	0	0	69.638	
Stage 3	-4.5	68.25	71.279	UL-RL	0.4722.728	0	0	0	0	71.279	
Stage 3	-4.7	72.15	72.898	UL-RL	0.4722.728	0	0	0	0	72.898	
Stage 3	-4.9	76.05	74.497	UL-RL	0.4722.728	0	0	0	0	74.497	
Stage 3	-5.1	79.95	76.08	UL-RL	0.4722.728	0	0	0	0	76.08	
Stage 3	-5.3	83.85	77.647	UL-RL	0.4722.728	0	0	0	0	77.647	
Stage 3	-5.5	87.75	79.2	UL-RL	0.4722.728	0	0	0	0	79.2	
Stage 3	-5.7	91.65	80.743	UL-RL	0.4722.728	0	0	0	0	80.743	
Stage 3	-5.9	95.55	82.275	UL-RL	0.4722.728	0	0	0	0	82.275	
Stage 3	-6.1	99.45	83.798	UL-RL	0.4722.728	0	0	0	0	83.798	
Stage 3	-6.3	103.35	85.314	UL-RL	0.4722.728	0	0	0	0	85.314	
Stage 3	-6.5	107.25	86.823	UL-RL	0.4722.728	0	0	0	0	86.823	
Stage 3	-6.7	111.15	88.327	UL-RL	0.4722.728	0	0	0	0	88.327	
Stage 3	-6.9	115.05	89.828	UL-RL	0.4722.728	0	0	0	0	89.828	
Stage 3	-7.1	117.95	88.387	UL-RL	0.3334.639	50	1	0	0	89.387	
Stage 3	-7.3	119.85	88.721	UL-RL	0.3334.639	50	3	0	0	91.721	
Stage 3	-7.5	121.75	89.073	UL-RL	0.3334.639	50	5	0	0	94.073	
Stage 3	-7.7	123.65	89.441	UL-RL	0.3334.639	50	7	0	0	96.441	
Stage 3	-7.9	125.55	89.826	UL-RL	0.3334.639	50	9	0	0	98.826	
Stage 3	-8.1	127.45	90.228	UL-RL	0.3334.639	50	11	0	0	101.228	
Stage 3	-8.3	129.35	90.646	UL-RL	0.3334.639	50	13	0	0	103.646	
Stage 3	-8.5	131.25	91.078	UL-RL	0.3334.639	50	15	0	0	106.078	
Stage 3	-8.7	133.15	91.524	UL-RL	0.3334.639	50	17	0	0	108.524	
Stage 3	-8.9	135.05	91.983	UL-RL	0.3334.639	50	19	0	0	110.983	
Stage 3	-9.1	136.95	92.454	UL-RL	0.3334.639	50	21	0	0	113.454	
Stage 3	-9.3	138.85	92.934	UL-RL	0.3334.639	50	23	0	0	115.934	
Stage 3	-9.5	140.75	93.424	UL-RL	0.3334.639	50	25	0	0	118.424	
Stage 3	-9.7	142.65	93.922	UL-RL	0.3334.639	50	27	0	0	120.922	
Stage 3	-9.9	144.55	94.427	UL-RL	0.3334.639	50	29	0	0	123.427	
Stage 3	-10.1	146.45	94.938	UL-RL	0.3334.639	50	31	0	0	125.938	
Stage 3	-10.3	148.35	95.454	UL-RL	0.3334.639	50	33	0	0	128.454	
Stage 3	-10.5	150.25	95.975	UL-RL	0.3334.639	50	35	0	0	130.975	
Stage 3	-10.7	152.15	96.5	UL-RL	0.3334.639	50	37	0	0	133.5	
Stage 3	-10.9	154.05	97.028	UL-RL	0.3334.639	50	39	0	0	136.028	
Stage 3	-11.1	155.95	97.559	UL-RL	0.3334.639	50	41	0	0	138.559	
Stage 3	-11.3	157.85	98.092	UL-RL	0.3334.639	50	43	0	0	141.092	
Stage 3	-11.5	159.75	98.628	UL-RL	0.3334.639	50	45	0	0	143.628	
Stage 3	-11.7	161.65	99.165	UL-RL	0.3334.639	50	47	0	0	146.165	
Stage 3	-11.9	163.55	99.705	UL-RL	0.3334.639	50	49	0	0	148.704	
Stage 3	-12.1	165.45	100.245	UL-RL	0.3334.639	50	51	0	0	151.245	
Stage 3	-12.3	167.35	100.788	UL-RL	0.3334.639	50	53	0	0	153.788	
Stage 3	-12.5	169.25	101.332	UL-RL	0.3334.639	50	55	0	0	156.332	
Stage 3	-12.7	171.15	101.877	UL-RL	0.3334.639	50	57	0	0	158.877	
Stage 3	-12.9	173.05	102.424	UL-RL	0.3334.639	50	59	0	0	161.424	
Stage 3	-13.1	174.95	102.973	UL-RL	0.3334.639	50	61	0	0	163.973	
Stage 3	-13.3	176.85	103.523	UL-RL	0.3334.639	50	63	0	0	166.523	
Stage 3	-13.5	178.75	104.075	UL-RL	0.3334.639	50	65	0	0	169.075	
Stage 3	-13.7	180.65	104.629	UL-RL	0.3334.639	50	67	0	0	171.629	

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Muro:		LEFT	Lato		RIGHT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 3	-13.9	182.55	105.185	UL-RL	0.333	4.639	50	69	0	0	174.185
Stage 3	-14.1	184.45	105.743	UL-RL	0.333	4.639	50	71	0	0	176.743
Stage 3	-14.3	186.35	106.303	UL-RL	0.333	4.639	50	73	0	0	179.303
Stage 3	-14.5	188.25	106.865	UL-RL	0.333	4.639	50	75	0	0	181.865
Stage 3	-14.7	190.15	107.43	UL-RL	0.333	4.639	50	77	0	0	184.43
Stage 3	-14.9	192.05	107.997	UL-RL	0.333	4.639	50	79	0	0	186.997
Stage 3	-15.1	193.95	108.567	UL-RL	0.333	4.639	50	81	0	0	189.567
Stage 3	-15.3	195.85	109.14	UL-RL	0.333	4.639	50	83	0	0	192.14
Stage 3	-15.5	197.75	109.715	UL-RL	0.333	4.639	50	85	0	0	194.715
Stage 3	-15.7	199.65	110.293	UL-RL	0.333	4.639	50	87	0	0	197.293
Stage 3	-15.9	201.55	110.874	UL-RL	0.333	4.639	50	89	0	0	199.874
Stage 3	-16.1	203.45	111.458	UL-RL	0.333	4.639	50	91	0	0	202.458
Stage 3	-16.3	205.35	112.045	UL-RL	0.333	4.639	50	93	0	0	205.044
Stage 3	-16.5	207.25	112.634	UL-RL	0.333	4.639	50	95	0	0	207.634
Stage 3	-16.7	209.15	113.227	UL-RL	0.333	4.639	50	97	0	0	210.227
Stage 3	-16.9	211.05	113.823	UL-RL	0.333	4.639	50	99	0	0	212.823
Stage 3	-17.1	212.95	114.422	UL-RL	0.333	4.639	50	101	0	0	215.422
Stage 3	-17.3	214.85	115.024	UL-RL	0.333	4.639	50	103	0	0	218.024
Stage 3	-17.5	216.75	115.628	UL-RL	0.333	4.639	50	105	0	0	220.628
Stage 3	-17.7	218.65	116.236	UL-RL	0.333	4.639	50	107	0	0	223.236
Stage 3	-17.9	220.55	116.847	UL-RL	0.333	4.639	50	109	0	0	225.847
Stage 3	-18.1	222.45	117.461	UL-RL	0.333	4.639	50	111	0	0	228.461
Stage 3	-18.3	224.35	118.078	UL-RL	0.333	4.639	50	113	0	0	231.078
Stage 3	-18.5	226.25	118.698	UL-RL	0.333	4.639	50	115	0	0	233.698
Stage 3	-18.7	228.15	119.321	UL-RL	0.333	4.639	50	117	0	0	236.321
Stage 3	-18.9	230.05	119.947	UL-RL	0.333	4.639	50	119	0	0	238.947
Stage 3	-19.1	231.95	120.576	UL-RL	0.333	4.639	50	121	0	0	241.576
Stage 3	-19.3	233.85	121.207	UL-RL	0.333	4.639	50	123	0	0	244.207
Stage 3	-19.5	235.75	121.842	UL-RL	0.333	4.639	50	125	0	0	246.842
Stage 3	-19.7	237.65	122.479	UL-RL	0.333	4.639	50	127	0	0	249.479
Stage 3	-19.9	239.55	123.119	UL-RL	0.333	4.639	50	129	0	0	252.119
Stage 3	-20	240.5	123.44	UL-RL	0.333	4.639	50	130	0	0	253.44

5.5.4. Tabella Risultati Terreno Left Wall - Nominal - Stage 4

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	LEFT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 4	0	2.778	0.753	ACTIVE	0.271	6.522	0	0	0	0.753
Stage 4	-0.2	6.139	1.664	ACTIVE	0.271	6.522	0	0	0	1.664
Stage 4	-0.4	10.884	2.95	ACTIVE	0.271	6.522	0	0	0	2.95
Stage 4	-0.5	13.267	3.595	ACTIVE	0.271	6.522	0	0	0	3.595
Stage 4	-0.7	18.761	5.084	ACTIVE	0.271	6.522	0	0	0	5.084
Stage 4	-0.9	23.704	6.424	ACTIVE	0.271	6.522	0	0	0	6.424
Stage 4	-1.1	29.257	21.444	UL-RL	0.472	2.728	0	0	0	21.444
Stage 4	-1.3	34.102	25.657	UL-RL	0.472	2.728	0	0	0	25.657
Stage 4	-1.5	39.629	29.602	UL-RL	0.472	2.728	0	0	0	29.602
Stage 4	-1.7	44.456	33.317	UL-RL	0.472	2.728	0	0	0	33.317
Stage 4	-1.9	49.982	36.829	UL-RL	0.472	2.728	0	0	0	36.829
Stage 4	-2.1	54.782	40.161	UL-RL	0.472	2.728	0	0	0	40.161
Stage 4	-2.3	60.295	43.33	UL-RL	0.472	2.728	0	0	0	43.33
Stage 4	-2.5	65.036	46.352	UL-RL	0.472	2.728	0	0	0	46.352
Stage 4	-2.7	70.555	49.239	UL-RL	0.472	2.728	0	0	0	49.239
Stage 4	-2.9	75.263	52.004	UL-RL	0.472	2.728	0	0	0	52.004
Stage 4	-3.1	80.755	54.656	UL-RL	0.472	2.728	0	0	0	54.656
Stage 4	-3.3	85.428	57.204	UL-RL	0.472	2.728	0	0	0	57.204
Stage 4	-3.5	90.864	59.658	UL-RL	0.472	2.728	0	0	0	59.658
Stage 4	-3.7	95.526	62.026	UL-RL	0.472	2.728	0	0	0	62.026
Stage 4	-3.9	100.85	64.313	UL-RL	0.472	2.728	0	0	0	64.313
Stage 4	-4.1	105.554	66.527	UL-RL	0.472	2.728	0	0	0	66.527
Stage 4	-4.3	110.765	68.675	UL-RL	0.472	2.728	0	0	0	68.675
Stage 4	-4.5	115.512	70.762	UL-RL	0.472	2.728	0	0	0	70.762
Stage 4	-4.7	120.609	72.793	UL-RL	0.472	2.728	0	0	0	72.793
Stage 4	-4.9	125.371	74.773	UL-RL	0.472	2.728	0	0	0	74.773
Stage 4	-5.1	130.382	76.707	UL-RL	0.472	2.728	0	0	0	76.707
Stage 4	-5.3	135.187	78.6	UL-RL	0.472	2.728	0	0	0	78.6
Stage 4	-5.5	140.084	80.455	UL-RL	0.472	2.728	0	0	0	80.455
Stage 4	-5.7	144.935	82.275	UL-RL	0.472	2.728	0	0	0	82.275
Stage 4	-5.9	149.719	84.065	UL-RL	0.472	2.728	0	0	0	84.065
Stage 4	-6.1	154.616	85.827	UL-RL	0.472	2.728	0	0	0	85.827
Stage 4	-6.3	159.288	87.563	UL-RL	0.472	2.728	0	0	0	87.563
Stage 4	-6.5	164.233	89.276	UL-RL	0.472	2.728	0	0	0	89.276
Stage 4	-6.7	168.793	90.968	UL-RL	0.472	2.728	0	0	0	90.968
Stage 4	-6.9	173.788	92.641	UL-RL	0.472	2.728	0	0	0	92.641
Stage 4	-7.1	177.238	85.589	UL-RL	0.333	4.639	50	1	0	86.589
Stage 4	-7.3	179.024	86.48	UL-RL	0.333	4.639	50	3	0	89.48
Stage 4	-7.5	180.826	87.327	UL-RL	0.333	4.639	50	5	0	92.327
Stage 4	-7.7	182.643	88.131	UL-RL	0.333	4.639	50	7	0	95.131
Stage 4	-7.9	184.472	88.895	UL-RL	0.333	4.639	50	9	0	97.895
Stage 4	-8.1	186.313	89.621	UL-RL	0.333	4.639	50	11	0	100.621
Stage 4	-8.3	188.164	90.313	UL-RL	0.333	4.639	50	13	0	103.313
Stage 4	-8.5	190.024	90.974	UL-RL	0.333	4.639	50	15	0	105.974
Stage 4	-8.7	191.892	91.606	UL-RL	0.333	4.639	50	17	0	108.606
Stage 4	-8.9	193.767	92.213	UL-RL	0.333	4.639	50	19	0	111.212
Stage 4	-9.1	195.649	92.797	UL-RL	0.333	4.639	50	21	0	113.797
Stage 4	-9.3	197.647	93.363	UL-RL	0.333	4.639	50	23	0	116.363
Stage 4	-9.5	199.972	93.912	UL-RL	0.333	4.639	50	25	0	118.912
Stage 4	-9.7	202.283	94.448	UL-RL	0.333	4.639	50	27	0	121.448
Stage 4	-9.9	205.482	94.972	UL-RL	0.333	4.639	50	29	0	123.972
Stage 4	-10.1	207.749	95.488	UL-RL	0.333	4.639	50	31	0	126.488
Stage 4	-10.3	210.005	95.996	UL-RL	0.333	4.639	50	33	0	128.996
Stage 4	-10.5	212.25	96.499	UL-RL	0.333	4.639	50	35	0	131.499
Stage 4	-10.7	214.484	96.998	UL-RL	0.333	4.639	50	37	0	133.998
Stage 4	-10.9	216.708	97.496	UL-RL	0.333	4.639	50	39	0	136.496
Stage 4	-11.1	218.923	97.992	UL-RL	0.333	4.639	50	41	0	138.992
Stage 4	-11.3	221.129	98.488	UL-RL	0.333	4.639	50	43	0	141.488
Stage 4	-11.5	223.325	98.986	UL-RL	0.333	4.639	50	45	0	143.986
Stage 4	-11.7	226.278	99.485	UL-RL	0.333	4.639	50	47	0	146.485
Stage 4	-11.9	228.446	99.987	UL-RL	0.333	4.639	50	49	0	148.987
Stage 4	-12.1	230.607	100.492	UL-RL	0.333	4.639	50	51	0	151.492
Stage 4	-12.3	232.761	101	UL-RL	0.333	4.639	50	53	0	154
Stage 4	-12.5	234.908	101.512	UL-RL	0.333	4.639	50	55	0	156.512
Stage 4	-12.7	237.048	102.027	UL-RL	0.333	4.639	50	57	0	159.027
Stage 4	-12.9	239.183	102.547	UL-RL	0.333	4.639	50	59	0	161.547
Stage 4	-13.1	241.311	103.072	UL-RL	0.333	4.639	50	61	0	164.072

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Muro:		LEFT	Lato		LEFT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 4	-13.3	243.434	103.6	UL-RL	0.333	4.639	50	63	0	0	166.6
Stage 4	-13.5	246.214	104.133	UL-RL	0.333	4.639	50	65	0	0	169.133
Stage 4	-13.7	248.316	104.67	UL-RL	0.333	4.639	50	67	0	0	171.67
Stage 4	-13.9	250.414	105.212	UL-RL	0.333	4.639	50	69	0	0	174.212
Stage 4	-14.1	252.507	105.758	UL-RL	0.333	4.639	50	71	0	0	176.758
Stage 4	-14.3	254.596	106.308	UL-RL	0.333	4.639	50	73	0	0	179.308
Stage 4	-14.5	256.68	106.862	UL-RL	0.333	4.639	50	75	0	0	181.862
Stage 4	-14.7	258.76	107.42	UL-RL	0.333	4.639	50	77	0	0	184.42
Stage 4	-14.9	260.836	107.982	UL-RL	0.333	4.639	50	79	0	0	186.982
Stage 4	-15.1	262.908	108.548	UL-RL	0.333	4.639	50	81	0	0	189.548
Stage 4	-15.3	265.561	109.118	UL-RL	0.333	4.639	50	83	0	0	192.118
Stage 4	-15.5	267.618	109.692	UL-RL	0.333	4.639	50	85	0	0	194.692
Stage 4	-15.7	269.672	110.269	UL-RL	0.333	4.639	50	87	0	0	197.269
Stage 4	-15.9	271.722	110.85	UL-RL	0.333	4.639	50	89	0	0	199.849
Stage 4	-16.1	273.77	111.434	UL-RL	0.333	4.639	50	91	0	0	202.434
Stage 4	-16.3	275.814	112.021	UL-RL	0.333	4.639	50	93	0	0	205.021
Stage 4	-16.5	277.855	112.612	UL-RL	0.333	4.639	50	95	0	0	207.612
Stage 4	-16.7	279.894	113.206	UL-RL	0.333	4.639	50	97	0	0	210.206
Stage 4	-16.9	281.929	113.803	UL-RL	0.333	4.639	50	99	0	0	212.803
Stage 4	-17.1	284.486	114.404	UL-RL	0.333	4.639	50	101	0	0	215.404
Stage 4	-17.3	286.51	115.007	UL-RL	0.333	4.639	50	103	0	0	218.007
Stage 4	-17.5	288.532	115.614	UL-RL	0.333	4.639	50	105	0	0	220.614
Stage 4	-17.7	290.552	116.224	UL-RL	0.333	4.639	50	107	0	0	223.224
Stage 4	-17.9	292.57	116.836	UL-RL	0.333	4.639	50	109	0	0	225.836
Stage 4	-18.1	294.585	117.452	UL-RL	0.333	4.639	50	111	0	0	228.452
Stage 4	-18.3	296.598	118.071	UL-RL	0.333	4.639	50	113	0	0	231.071
Stage 4	-18.5	298.608	118.693	UL-RL	0.333	4.639	50	115	0	0	233.693
Stage 4	-18.7	300.617	119.317	UL-RL	0.333	4.639	50	117	0	0	236.317
Stage 4	-18.9	303.098	119.945	UL-RL	0.333	4.639	50	119	0	0	238.945
Stage 4	-19.1	305.098	120.575	UL-RL	0.333	4.639	50	121	0	0	241.575
Stage 4	-19.3	307.097	121.208	UL-RL	0.333	4.639	50	123	0	0	244.208
Stage 4	-19.5	309.094	121.844	UL-RL	0.333	4.639	50	125	0	0	246.844
Stage 4	-19.7	311.088	122.483	UL-RL	0.333	4.639	50	127	0	0	249.483
Stage 4	-19.9	313.082	123.125	UL-RL	0.333	4.639	50	129	0	0	252.125
Stage 4	-20	314.302	123.447	UL-RL	0.333	4.639	50	130	0	0	253.447

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 4	0	0	0	REMOVED	0	0	0	0	0	0	
Stage 4	-0.2	0	0	REMOVED	0	0	0	0	0	0	
Stage 4	-0.4	0	0	REMOVED	0	0	0	0	0	0	
Stage 4	-0.5	0	0	REMOVED	0	0	0	0	0	0	
Stage 4	-0.7	0	0	REMOVED	0	0	0	0	0	0	
Stage 4	-0.9	0	0	REMOVED	0	0	0	0	0	0	
Stage 4	-1.1	1.95	5.32	PASSIVE	0.4722.728	0	0	0	0	5.32	
Stage 4	-1.3	5.85	15.959	PASSIVE	0.4722.728	0	0	0	0	15.959	
Stage 4	-1.5	9.75	26.598	PASSIVE	0.4722.728	0	0	0	0	26.598	
Stage 4	-1.7	13.65	37.237	PASSIVE	0.4722.728	0	0	0	0	37.237	
Stage 4	-1.9	17.55	45.395	V-C	0.4722.728	0	0	0	0	45.395	
Stage 4	-2.1	21.45	48.017	V-C	0.4722.728	0	0	0	0	48.017	
Stage 4	-2.3	25.35	50.488	V-C	0.4722.728	0	0	0	0	50.488	
Stage 4	-2.5	29.25	52.832	V-C	0.4722.728	0	0	0	0	52.832	
Stage 4	-2.7	33.15	55.066	V-C	0.4722.728	0	0	0	0	55.066	
Stage 4	-2.9	37.05	57.138	UL-RL	0.4722.728	0	0	0	0	57.138	
Stage 4	-3.1	40.95	59.076	UL-RL	0.4722.728	0	0	0	0	59.076	
Stage 4	-3.3	44.85	60.95	UL-RL	0.4722.728	0	0	0	0	60.95	
Stage 4	-3.5	48.75	62.77	UL-RL	0.4722.728	0	0	0	0	62.77	
Stage 4	-3.7	52.65	64.542	UL-RL	0.4722.728	0	0	0	0	64.542	
Stage 4	-3.9	56.55	66.274	UL-RL	0.4722.728	0	0	0	0	66.274	
Stage 4	-4.1	60.45	67.971	UL-RL	0.4722.728	0	0	0	0	67.971	
Stage 4	-4.3	64.35	69.639	UL-RL	0.4722.728	0	0	0	0	69.639	
Stage 4	-4.5	68.25	71.28	UL-RL	0.4722.728	0	0	0	0	71.28	
Stage 4	-4.7	72.15	72.899	UL-RL	0.4722.728	0	0	0	0	72.899	
Stage 4	-4.9	76.05	74.498	UL-RL	0.4722.728	0	0	0	0	74.498	
Stage 4	-5.1	79.95	76.08	UL-RL	0.4722.728	0	0	0	0	76.08	
Stage 4	-5.3	83.85	77.647	UL-RL	0.4722.728	0	0	0	0	77.647	
Stage 4	-5.5	87.75	79.201	UL-RL	0.4722.728	0	0	0	0	79.201	
Stage 4	-5.7	91.65	80.743	UL-RL	0.4722.728	0	0	0	0	80.743	
Stage 4	-5.9	95.55	82.275	UL-RL	0.4722.728	0	0	0	0	82.275	
Stage 4	-6.1	99.45	83.798	UL-RL	0.4722.728	0	0	0	0	83.798	
Stage 4	-6.3	103.35	85.314	UL-RL	0.4722.728	0	0	0	0	85.314	
Stage 4	-6.5	107.25	86.823	UL-RL	0.4722.728	0	0	0	0	86.823	
Stage 4	-6.7	111.15	88.327	UL-RL	0.4722.728	0	0	0	0	88.327	
Stage 4	-6.9	115.05	89.828	UL-RL	0.4722.728	0	0	0	0	89.828	
Stage 4	-7.1	117.95	88.387	UL-RL	0.3334.639	50	1	0	0	89.387	
Stage 4	-7.3	119.85	88.722	UL-RL	0.3334.639	50	3	0	0	91.722	
Stage 4	-7.5	121.75	89.073	UL-RL	0.3334.639	50	5	0	0	94.073	
Stage 4	-7.7	123.65	89.441	UL-RL	0.3334.639	50	7	0	0	96.441	
Stage 4	-7.9	125.55	89.826	UL-RL	0.3334.639	50	9	0	0	98.826	
Stage 4	-8.1	127.45	90.228	UL-RL	0.3334.639	50	11	0	0	101.228	
Stage 4	-8.3	129.35	90.646	UL-RL	0.3334.639	50	13	0	0	103.646	
Stage 4	-8.5	131.25	91.078	UL-RL	0.3334.639	50	15	0	0	106.078	
Stage 4	-8.7	133.15	91.524	UL-RL	0.3334.639	50	17	0	0	108.524	
Stage 4	-8.9	135.05	91.983	UL-RL	0.3334.639	50	19	0	0	110.983	
Stage 4	-9.1	136.95	92.453	UL-RL	0.3334.639	50	21	0	0	113.453	
Stage 4	-9.3	138.85	92.934	UL-RL	0.3334.639	50	23	0	0	115.934	
Stage 4	-9.5	140.75	93.424	UL-RL	0.3334.639	50	25	0	0	118.424	
Stage 4	-9.7	142.65	93.922	UL-RL	0.3334.639	50	27	0	0	120.922	
Stage 4	-9.9	144.55	94.427	UL-RL	0.3334.639	50	29	0	0	123.427	
Stage 4	-10.1	146.45	94.938	UL-RL	0.3334.639	50	31	0	0	125.938	
Stage 4	-10.3	148.35	95.454	UL-RL	0.3334.639	50	33	0	0	128.454	
Stage 4	-10.5	150.25	95.975	UL-RL	0.3334.639	50	35	0	0	130.975	
Stage 4	-10.7	152.15	96.5	UL-RL	0.3334.639	50	37	0	0	133.5	
Stage 4	-10.9	154.05	97.028	UL-RL	0.3334.639	50	39	0	0	136.028	
Stage 4	-11.1	155.95	97.559	UL-RL	0.3334.639	50	41	0	0	138.559	
Stage 4	-11.3	157.85	98.092	UL-RL	0.3334.639	50	43	0	0	141.092	
Stage 4	-11.5	159.75	98.628	UL-RL	0.3334.639	50	45	0	0	143.628	
Stage 4	-11.7	161.65	99.165	UL-RL	0.3334.639	50	47	0	0	146.165	
Stage 4	-11.9	163.55	99.705	UL-RL	0.3334.639	50	49	0	0	148.704	
Stage 4	-12.1	165.45	100.245	UL-RL	0.3334.639	50	51	0	0	151.245	
Stage 4	-12.3	167.35	100.788	UL-RL	0.3334.639	50	53	0	0	153.788	
Stage 4	-12.5	169.25	101.332	UL-RL	0.3334.639	50	55	0	0	156.332	
Stage 4	-12.7	171.15	101.877	UL-RL	0.3334.639	50	57	0	0	158.877	
Stage 4	-12.9	173.05	102.424	UL-RL	0.3334.639	50	59	0	0	161.424	
Stage 4	-13.1	174.95	102.973	UL-RL	0.3334.639	50	61	0	0	163.973	
Stage 4	-13.3	176.85	103.523	UL-RL	0.3334.639	50	63	0	0	166.523	
Stage 4	-13.5	178.75	104.075	UL-RL	0.3334.639	50	65	0	0	169.075	
Stage 4	-13.7	180.65	104.629	UL-RL	0.3334.639	50	67	0	0	171.629	

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Muro:		LEFT	Lato		RIGHT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 4	-13.9	182.55	105.185	UL-RL	0.333	4.639	50	69	0	0	174.185
Stage 4	-14.1	184.45	105.743	UL-RL	0.333	4.639	50	71	0	0	176.743
Stage 4	-14.3	186.35	106.303	UL-RL	0.333	4.639	50	73	0	0	179.303
Stage 4	-14.5	188.25	106.865	UL-RL	0.333	4.639	50	75	0	0	181.865
Stage 4	-14.7	190.15	107.43	UL-RL	0.333	4.639	50	77	0	0	184.43
Stage 4	-14.9	192.05	107.997	UL-RL	0.333	4.639	50	79	0	0	186.997
Stage 4	-15.1	193.95	108.567	UL-RL	0.333	4.639	50	81	0	0	189.567
Stage 4	-15.3	195.85	109.14	UL-RL	0.333	4.639	50	83	0	0	192.14
Stage 4	-15.5	197.75	109.715	UL-RL	0.333	4.639	50	85	0	0	194.715
Stage 4	-15.7	199.65	110.293	UL-RL	0.333	4.639	50	87	0	0	197.293
Stage 4	-15.9	201.55	110.874	UL-RL	0.333	4.639	50	89	0	0	199.874
Stage 4	-16.1	203.45	111.458	UL-RL	0.333	4.639	50	91	0	0	202.458
Stage 4	-16.3	205.35	112.045	UL-RL	0.333	4.639	50	93	0	0	205.044
Stage 4	-16.5	207.25	112.634	UL-RL	0.333	4.639	50	95	0	0	207.634
Stage 4	-16.7	209.15	113.227	UL-RL	0.333	4.639	50	97	0	0	210.227
Stage 4	-16.9	211.05	113.823	UL-RL	0.333	4.639	50	99	0	0	212.823
Stage 4	-17.1	212.95	114.422	UL-RL	0.333	4.639	50	101	0	0	215.422
Stage 4	-17.3	214.85	115.024	UL-RL	0.333	4.639	50	103	0	0	218.024
Stage 4	-17.5	216.75	115.628	UL-RL	0.333	4.639	50	105	0	0	220.628
Stage 4	-17.7	218.65	116.236	UL-RL	0.333	4.639	50	107	0	0	223.236
Stage 4	-17.9	220.55	116.847	UL-RL	0.333	4.639	50	109	0	0	225.847
Stage 4	-18.1	222.45	117.461	UL-RL	0.333	4.639	50	111	0	0	228.461
Stage 4	-18.3	224.35	118.078	UL-RL	0.333	4.639	50	113	0	0	231.078
Stage 4	-18.5	226.25	118.698	UL-RL	0.333	4.639	50	115	0	0	233.698
Stage 4	-18.7	228.15	119.321	UL-RL	0.333	4.639	50	117	0	0	236.321
Stage 4	-18.9	230.05	119.947	UL-RL	0.333	4.639	50	119	0	0	238.947
Stage 4	-19.1	231.95	120.576	UL-RL	0.333	4.639	50	121	0	0	241.576
Stage 4	-19.3	233.85	121.207	UL-RL	0.333	4.639	50	123	0	0	244.207
Stage 4	-19.5	235.75	121.842	UL-RL	0.333	4.639	50	125	0	0	246.842
Stage 4	-19.7	237.65	122.479	UL-RL	0.333	4.639	50	127	0	0	249.479
Stage 4	-19.9	239.55	123.119	UL-RL	0.333	4.639	50	129	0	0	252.119
Stage 4	-20	240.5	123.44	UL-RL	0.333	4.639	50	130	0	0	253.44

5.5.5. Tabella Risultati Terreno Left Wall - Nominal - Stage 5

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	LEFT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 5	0	2.778	0.753	ACTIVE	0.271	6.522	0	0	0	0.753
Stage 5	-0.2	6.139	1.664	ACTIVE	0.271	6.522	0	0	0	1.664
Stage 5	-0.4	10.884	2.95	ACTIVE	0.271	6.522	0	0	0	2.95
Stage 5	-0.5	13.267	3.595	ACTIVE	0.271	6.522	0	0	0	3.595
Stage 5	-0.7	18.761	5.084	ACTIVE	0.271	6.522	0	0	0	5.084
Stage 5	-0.9	23.704	6.424	ACTIVE	0.271	6.522	0	0	0	6.424
Stage 5	-1.1	29.257	13.809	ACTIVE	0.472	2.728	0	0	0	13.809
Stage 5	-1.3	34.102	16.096	ACTIVE	0.472	2.728	0	0	0	16.096
Stage 5	-1.5	39.629	18.705	ACTIVE	0.472	2.728	0	0	0	18.705
Stage 5	-1.7	44.456	20.983	ACTIVE	0.472	2.728	0	0	0	20.983
Stage 5	-1.9	49.982	23.592	ACTIVE	0.472	2.728	0	0	0	23.592
Stage 5	-2.1	54.782	25.857	ACTIVE	0.472	2.728	0	0	0	25.857
Stage 5	-2.3	60.295	28.459	ACTIVE	0.472	2.728	0	0	0	28.459
Stage 5	-2.5	65.036	30.697	ACTIVE	0.472	2.728	0	0	0	30.697
Stage 5	-2.7	70.555	33.302	ACTIVE	0.472	2.728	0	0	0	33.302
Stage 5	-2.9	75.263	35.524	ACTIVE	0.472	2.728	0	0	0	35.524
Stage 5	-3.1	80.755	38.117	ACTIVE	0.472	2.728	0	0	0	38.117
Stage 5	-3.3	85.428	40.322	ACTIVE	0.472	2.728	0	0	0	40.322
Stage 5	-3.5	90.864	42.888	ACTIVE	0.472	2.728	0	0	0	42.888
Stage 5	-3.7	95.526	45.088	ACTIVE	0.472	2.728	0	0	0	45.088
Stage 5	-3.9	100.85	47.601	ACTIVE	0.472	2.728	0	0	0	47.601
Stage 5	-4.1	105.554	49.822	ACTIVE	0.472	2.728	0	0	0	49.822
Stage 5	-4.3	110.765	52.281	ACTIVE	0.472	2.728	0	0	0	52.281
Stage 5	-4.5	115.512	54.521	ACTIVE	0.472	2.728	0	0	0	54.521
Stage 5	-4.7	120.609	56.927	ACTIVE	0.472	2.728	0	0	0	56.927
Stage 5	-4.9	125.371	59.175	ACTIVE	0.472	2.728	0	0	0	59.175
Stage 5	-5.1	130.382	61.54	ACTIVE	0.472	2.728	0	0	0	61.54
Stage 5	-5.3	135.187	63.808	ACTIVE	0.472	2.728	0	0	0	63.808
Stage 5	-5.5	140.084	66.12	ACTIVE	0.472	2.728	0	0	0	66.12
Stage 5	-5.7	144.935	68.409	ACTIVE	0.472	2.728	0	0	0	68.409
Stage 5	-5.9	149.719	70.667	ACTIVE	0.472	2.728	0	0	0	70.667
Stage 5	-6.1	154.616	72.979	ACTIVE	0.472	2.728	0	0	0	72.979
Stage 5	-6.3	159.288	75.184	ACTIVE	0.472	2.728	0	0	0	75.184
Stage 5	-6.5	164.233	77.518	ACTIVE	0.472	2.728	0	0	0	77.518
Stage 5	-6.7	168.793	79.67	ACTIVE	0.472	2.728	0	0	0	79.67
Stage 5	-6.9	173.788	82.028	ACTIVE	0.472	2.728	0	0	0	82.028
Stage 5	-7.1	177.238	1.314	ACTIVE	0.333	4.639	50	1	0	2.314
Stage 5	-7.3	179.024	1.909	ACTIVE	0.333	4.639	50	3	0	4.909
Stage 5	-7.5	180.826	2.509	ACTIVE	0.333	4.639	50	5	0	7.509
Stage 5	-7.7	182.643	3.114	ACTIVE	0.333	4.639	50	7	0	10.114
Stage 5	-7.9	184.472	10.639	UL-RL	0.333	4.639	50	9	0	19.639
Stage 5	-8.1	186.313	18.12	UL-RL	0.333	4.639	50	11	0	29.12
Stage 5	-8.3	188.164	25.218	UL-RL	0.333	4.639	50	13	0	38.218
Stage 5	-8.5	190.024	31.912	UL-RL	0.333	4.639	50	15	0	46.912
Stage 5	-8.7	191.892	38.189	UL-RL	0.333	4.639	50	17	0	55.188
Stage 5	-8.9	193.767	44.04	UL-RL	0.333	4.639	50	19	0	63.04
Stage 5	-9.1	195.649	49.466	UL-RL	0.333	4.639	50	21	0	70.466
Stage 5	-9.3	197.647	54.472	UL-RL	0.333	4.639	50	23	0	77.472
Stage 5	-9.5	199.972	59.066	UL-RL	0.333	4.639	50	25	0	84.066
Stage 5	-9.7	202.283	63.263	UL-RL	0.333	4.639	50	27	0	90.263
Stage 5	-9.9	205.482	67.078	UL-RL	0.333	4.639	50	29	0	96.078
Stage 5	-10.1	207.749	70.529	UL-RL	0.333	4.639	50	31	0	101.529
Stage 5	-10.3	210.005	73.636	UL-RL	0.333	4.639	50	33	0	106.636
Stage 5	-10.5	212.25	76.422	UL-RL	0.333	4.639	50	35	0	111.422
Stage 5	-10.7	214.484	78.907	UL-RL	0.333	4.639	50	37	0	115.907
Stage 5	-10.9	216.708	81.115	UL-RL	0.333	4.639	50	39	0	120.115
Stage 5	-11.1	218.923	83.067	UL-RL	0.333	4.639	50	41	0	124.067
Stage 5	-11.3	221.129	84.786	UL-RL	0.333	4.639	50	43	0	127.786
Stage 5	-11.5	223.325	86.294	UL-RL	0.333	4.639	50	45	0	131.294
Stage 5	-11.7	226.278	87.612	UL-RL	0.333	4.639	50	47	0	134.612
Stage 5	-11.9	228.446	88.76	UL-RL	0.333	4.639	50	49	0	137.76
Stage 5	-12.1	230.607	89.756	UL-RL	0.333	4.639	50	51	0	140.756
Stage 5	-12.3	232.761	90.621	UL-RL	0.333	4.639	50	53	0	143.621
Stage 5	-12.5	234.908	91.369	UL-RL	0.333	4.639	50	55	0	146.369
Stage 5	-12.7	237.048	92.019	UL-RL	0.333	4.639	50	57	0	149.018
Stage 5	-12.9	239.183	92.583	UL-RL	0.333	4.639	50	59	0	151.583
Stage 5	-13.1	241.311	93.076	UL-RL	0.333	4.639	50	61	0	154.076

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		LEFT			
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 5	-13.3	243.434	93.51	UL-RL	0.333	4.639	50	63	0	0	156.51
Stage 5	-13.5	246.214	93.896	UL-RL	0.333	4.639	50	65	0	0	158.896
Stage 5	-13.7	248.316	94.245	UL-RL	0.333	4.639	50	67	0	0	161.245
Stage 5	-13.9	250.414	94.565	UL-RL	0.333	4.639	50	69	0	0	163.565
Stage 5	-14.1	252.507	94.865	UL-RL	0.333	4.639	50	71	0	0	165.864
Stage 5	-14.3	254.596	95.151	UL-RL	0.333	4.639	50	73	0	0	168.15
Stage 5	-14.5	256.68	95.429	UL-RL	0.333	4.639	50	75	0	0	170.429
Stage 5	-14.7	258.76	95.706	UL-RL	0.333	4.639	50	77	0	0	172.706
Stage 5	-14.9	260.836	95.985	UL-RL	0.333	4.639	50	79	0	0	174.985
Stage 5	-15.1	262.908	96.27	UL-RL	0.333	4.639	50	81	0	0	177.27
Stage 5	-15.3	265.561	96.564	UL-RL	0.333	4.639	50	83	0	0	179.564
Stage 5	-15.5	267.618	96.87	UL-RL	0.333	4.639	50	85	0	0	181.87
Stage 5	-15.7	269.672	97.189	UL-RL	0.333	4.639	50	87	0	0	184.189
Stage 5	-15.9	271.722	97.524	UL-RL	0.333	4.639	50	89	0	0	186.524
Stage 5	-16.1	273.77	97.874	UL-RL	0.333	4.639	50	91	0	0	188.874
Stage 5	-16.3	275.814	98.24	UL-RL	0.333	4.639	50	93	0	0	191.24
Stage 5	-16.5	277.855	98.623	UL-RL	0.333	4.639	50	95	0	0	193.623
Stage 5	-16.7	279.894	99.023	UL-RL	0.333	4.639	50	97	0	0	196.023
Stage 5	-16.9	281.929	99.439	UL-RL	0.333	4.639	50	99	0	0	198.439
Stage 5	-17.1	284.486	99.871	UL-RL	0.333	4.639	50	101	0	0	200.871
Stage 5	-17.3	286.51	100.317	UL-RL	0.333	4.639	50	103	0	0	203.317
Stage 5	-17.5	288.532	100.778	UL-RL	0.333	4.639	50	105	0	0	205.778
Stage 5	-17.7	290.552	101.251	UL-RL	0.333	4.639	50	107	0	0	208.251
Stage 5	-17.9	292.57	101.737	UL-RL	0.333	4.639	50	109	0	0	210.737
Stage 5	-18.1	294.585	102.233	UL-RL	0.333	4.639	50	111	0	0	213.233
Stage 5	-18.3	296.598	102.74	UL-RL	0.333	4.639	50	113	0	0	215.74
Stage 5	-18.5	298.608	103.254	UL-RL	0.333	4.639	50	115	0	0	218.254
Stage 5	-18.7	300.617	103.777	UL-RL	0.333	4.639	50	117	0	0	220.777
Stage 5	-18.9	303.098	104.306	UL-RL	0.333	4.639	50	119	0	0	223.306
Stage 5	-19.1	305.098	104.841	UL-RL	0.333	4.639	50	121	0	0	225.841
Stage 5	-19.3	307.097	105.38	UL-RL	0.333	4.639	50	123	0	0	228.38
Stage 5	-19.5	309.094	105.924	UL-RL	0.333	4.639	50	125	0	0	230.924
Stage 5	-19.7	311.088	106.471	UL-RL	0.333	4.639	50	127	0	0	233.471
Stage 5	-19.9	313.082	107.021	UL-RL	0.333	4.639	50	129	0	0	236.021
Stage 5	-20	314.302	107.297	UL-RL	0.333	4.639	50	130	0	0	237.297

Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 5	0	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-0.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-0.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-0.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-1.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-1.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-1.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-1.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-1.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-2.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-2.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-2.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-2.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-2.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-3.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-3.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-3.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-3.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-3.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-4.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-4.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-4.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-4.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-4.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-5.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-5.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-5.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-5.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-5.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 5	-6.1	1.95	5.319	PASSIVE	0.472	2.728	0	0	0	0	5.319
Stage 5	-6.3	5.85	15.959	PASSIVE	0.472	2.728	0	0	0	0	15.959
Stage 5	-6.5	9.75	26.598	PASSIVE	0.472	2.728	0	0	0	0	26.598
Stage 5	-6.7	13.65	37.237	PASSIVE	0.472	2.728	0	0	0	0	37.237
Stage 5	-6.9	17.55	47.876	PASSIVE	0.472	2.728	0	0	0	0	47.876
Stage 5	-7.1	20.45	113.707	V-C	0.333	4.639	50	1	0	0	114.707
Stage 5	-7.3	22.35	111.158	V-C	0.333	4.639	50	3	0	0	114.158
Stage 5	-7.5	24.25	108.659	V-C	0.333	4.639	50	5	0	0	113.659
Stage 5	-7.7	26.15	106.24	V-C	0.333	4.639	50	7	0	0	113.24
Stage 5	-7.9	28.05	103.928	V-C	0.333	4.639	50	9	0	0	112.928
Stage 5	-8.1	29.95	101.741	V-C	0.333	4.639	50	11	0	0	112.741
Stage 5	-8.3	31.85	99.696	V-C	0.333	4.639	50	13	0	0	112.696
Stage 5	-8.5	33.75	97.803	V-C	0.333	4.639	50	15	0	0	112.803
Stage 5	-8.7	35.65	96.072	V-C	0.333	4.639	50	17	0	0	113.072
Stage 5	-8.9	37.55	94.343	UL-RL	0.333	4.639	50	19	0	0	113.343
Stage 5	-9.1	39.45	91.795	UL-RL	0.333	4.639	50	21	0	0	112.795
Stage 5	-9.3	41.35	89.513	UL-RL	0.333	4.639	50	23	0	0	112.513
Stage 5	-9.5	43.25	87.494	UL-RL	0.333	4.639	50	25	0	0	112.494
Stage 5	-9.7	45.15	85.729	UL-RL	0.333	4.639	50	27	0	0	112.729
Stage 5	-9.9	47.05	84.21	UL-RL	0.333	4.639	50	29	0	0	113.21
Stage 5	-10.1	48.95	82.926	UL-RL	0.333	4.639	50	31	0	0	113.925
Stage 5	-10.3	50.85	81.863	UL-RL	0.333	4.639	50	33	0	0	114.863
Stage 5	-10.5	52.75	81.01	UL-RL	0.333	4.639	50	35	0	0	116.01
Stage 5	-10.7	54.65	80.352	UL-RL	0.333	4.639	50	37	0	0	117.352
Stage 5	-10.9	56.55	79.875	UL-RL	0.333	4.639	50	39	0	0	118.875
Stage 5	-11.1	58.45	79.565	UL-RL	0.333	4.639	50	41	0	0	120.565
Stage 5	-11.3	60.35	79.408	UL-RL	0.333	4.639	50	43	0	0	122.408
Stage 5	-11.5	62.25	79.39	UL-RL	0.333	4.639	50	45	0	0	124.39
Stage 5	-11.7	64.15	79.497	UL-RL	0.333	4.639	50	47	0	0	126.497
Stage 5	-11.9	66.05	79.717	UL-RL	0.333	4.639	50	49	0	0	128.717
Stage 5	-12.1	67.95	80.037	UL-RL	0.333	4.639	50	51	0	0	131.037
Stage 5	-12.3	69.85	80.445	UL-RL	0.333	4.639	50	53	0	0	133.445
Stage 5	-12.5	71.75	80.93	UL-RL	0.333	4.639	50	55	0	0	135.93
Stage 5	-12.7	73.65	81.483	UL-RL	0.333	4.639	50	57	0	0	138.483
Stage 5	-12.9	75.55	82.094	UL-RL	0.333	4.639	50	59	0	0	141.093
Stage 5	-13.1	77.45	82.753	UL-RL	0.333	4.639	50	61	0	0	143.753
Stage 5	-13.3	79.35	83.453	UL-RL	0.333	4.639	50	63	0	0	146.453
Stage 5	-13.5	81.25	84.187	UL-RL	0.333	4.639	50	65	0	0	149.187
Stage 5	-13.7	83.15	84.948	UL-RL	0.333	4.639	50	67	0	0	151.948

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Muro:		LEFT	Lato		RIGHT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 5	-13.9	85.05	85.731	UL-RL	0.333	4.639	50	69	0	0	154.731
Stage 5	-14.1	86.95	86.53	UL-RL	0.333	4.639	50	71	0	0	157.53
Stage 5	-14.3	88.85	87.34	UL-RL	0.333	4.639	50	73	0	0	160.34
Stage 5	-14.5	90.75	88.159	UL-RL	0.333	4.639	50	75	0	0	163.159
Stage 5	-14.7	92.65	88.981	UL-RL	0.333	4.639	50	77	0	0	165.981
Stage 5	-14.9	94.55	89.806	UL-RL	0.333	4.639	50	79	0	0	168.806
Stage 5	-15.1	96.45	90.629	UL-RL	0.333	4.639	50	81	0	0	171.629
Stage 5	-15.3	98.35	91.45	UL-RL	0.333	4.639	50	83	0	0	174.45
Stage 5	-15.5	100.25	92.267	UL-RL	0.333	4.639	50	85	0	0	177.267
Stage 5	-15.7	102.15	93.078	UL-RL	0.333	4.639	50	87	0	0	180.078
Stage 5	-15.9	104.05	93.882	UL-RL	0.333	4.639	50	89	0	0	182.882
Stage 5	-16.1	105.95	94.68	UL-RL	0.333	4.639	50	91	0	0	185.68
Stage 5	-16.3	107.85	95.471	UL-RL	0.333	4.639	50	93	0	0	188.471
Stage 5	-16.5	109.75	96.254	UL-RL	0.333	4.639	50	95	0	0	191.254
Stage 5	-16.7	111.65	97.03	UL-RL	0.333	4.639	50	97	0	0	194.03
Stage 5	-16.9	113.55	97.8	UL-RL	0.333	4.639	50	99	0	0	196.8
Stage 5	-17.1	115.45	98.562	UL-RL	0.333	4.639	50	101	0	0	199.562
Stage 5	-17.3	117.35	99.319	UL-RL	0.333	4.639	50	103	0	0	202.319
Stage 5	-17.5	119.25	100.07	UL-RL	0.333	4.639	50	105	0	0	205.07
Stage 5	-17.7	121.15	100.816	UL-RL	0.333	4.639	50	107	0	0	207.816
Stage 5	-17.9	123.05	101.559	UL-RL	0.333	4.639	50	109	0	0	210.559
Stage 5	-18.1	124.95	102.298	UL-RL	0.333	4.639	50	111	0	0	213.298
Stage 5	-18.3	126.85	103.034	UL-RL	0.333	4.639	50	113	0	0	216.034
Stage 5	-18.5	128.75	103.769	UL-RL	0.333	4.639	50	115	0	0	218.769
Stage 5	-18.7	130.65	104.503	UL-RL	0.333	4.639	50	117	0	0	221.503
Stage 5	-18.9	132.55	105.236	UL-RL	0.333	4.639	50	119	0	0	224.236
Stage 5	-19.1	134.45	105.969	UL-RL	0.333	4.639	50	121	0	0	226.969
Stage 5	-19.3	136.35	106.703	UL-RL	0.333	4.639	50	123	0	0	229.703
Stage 5	-19.5	138.25	107.438	UL-RL	0.333	4.639	50	125	0	0	232.438
Stage 5	-19.7	140.15	108.175	UL-RL	0.333	4.639	50	127	0	0	235.175
Stage 5	-19.9	142.05	108.914	UL-RL	0.333	4.639	50	129	0	0	237.914
Stage 5	-20	143	109.284	UL-RL	0.333	4.639	50	130	0	0	239.284

5.5.6. Tabella Risultati Terreno Left Wall - Nominal - Stage 6

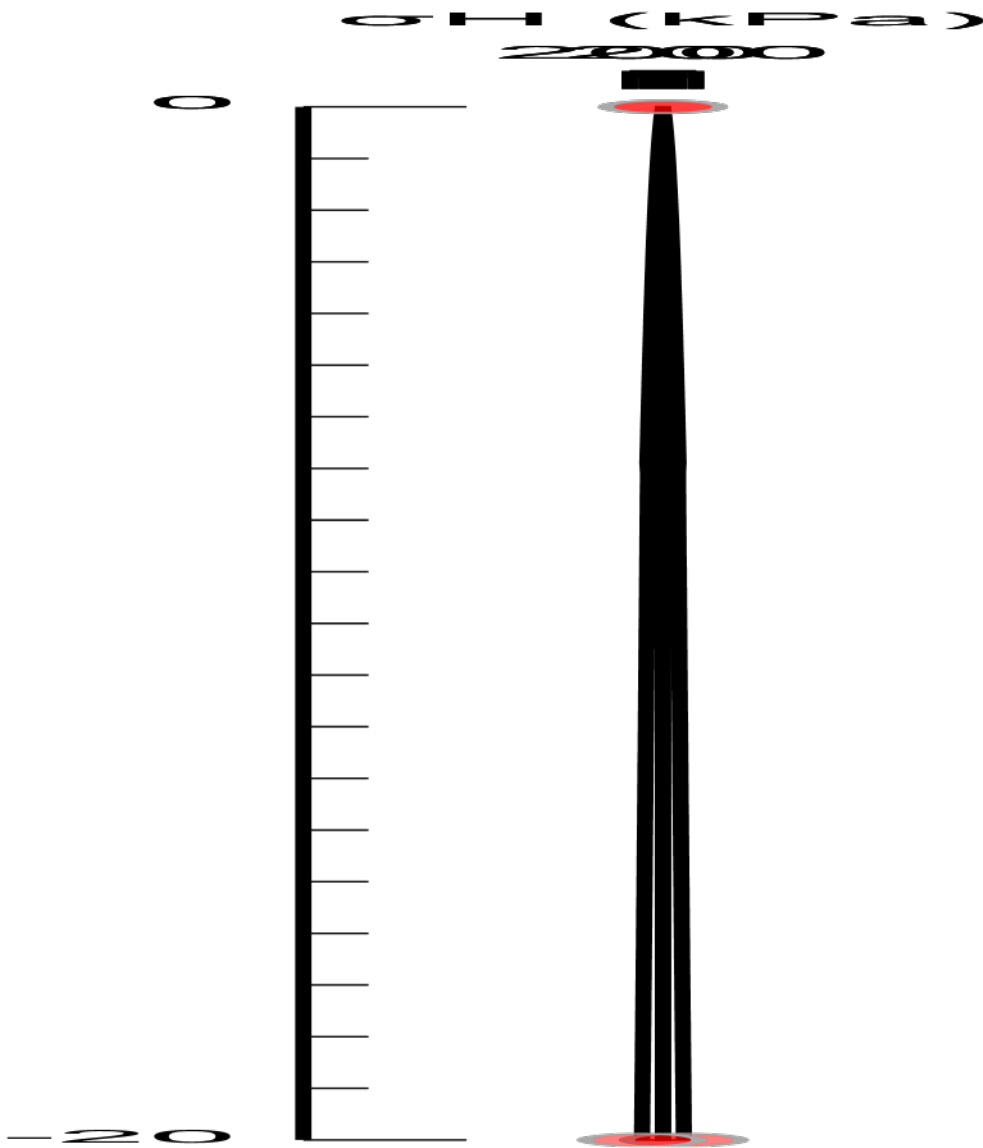
Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	LEFT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)
Stage 6	0	2.778	0.753	ACTIVE	0.271	6.312	0	0	0	0.753
Stage 6	-0.2	6.139	1.664	ACTIVE	0.271	6.312	0	0	0	1.664
Stage 6	-0.4	10.884	2.95	ACTIVE	0.271	6.312	0	0	0	2.95
Stage 6	-0.5	13.267	3.595	ACTIVE	0.271	6.312	0	0	0	3.595
Stage 6	-0.7	18.761	5.084	ACTIVE	0.271	6.312	0	0	0	5.084
Stage 6	-0.9	23.704	6.424	ACTIVE	0.271	6.312	0	0	0	6.424
Stage 6	-1.1	29.257	13.809	ACTIVE	0.472	2.487	0	0	0	13.809
Stage 6	-1.3	34.102	16.096	ACTIVE	0.472	2.487	0	0	0	16.096
Stage 6	-1.5	39.629	18.705	ACTIVE	0.472	2.487	0	0	0	18.705
Stage 6	-1.7	44.456	20.983	ACTIVE	0.472	2.487	0	0	0	20.983
Stage 6	-1.9	49.982	23.592	ACTIVE	0.472	2.487	0	0	0	23.592
Stage 6	-2.1	54.782	25.857	ACTIVE	0.472	2.487	0	0	0	25.857
Stage 6	-2.3	60.295	28.459	ACTIVE	0.472	2.487	0	0	0	28.459
Stage 6	-2.5	65.036	30.697	ACTIVE	0.472	2.487	0	0	0	30.697
Stage 6	-2.7	70.555	33.302	ACTIVE	0.472	2.487	0	0	0	33.302
Stage 6	-2.9	75.263	35.524	ACTIVE	0.472	2.487	0	0	0	35.524
Stage 6	-3.1	80.755	38.117	ACTIVE	0.472	2.487	0	0	0	38.117
Stage 6	-3.3	85.428	40.322	ACTIVE	0.472	2.487	0	0	0	40.322
Stage 6	-3.5	90.864	42.888	ACTIVE	0.472	2.487	0	0	0	42.888
Stage 6	-3.7	95.526	45.088	ACTIVE	0.472	2.487	0	0	0	45.088
Stage 6	-3.9	100.85	47.601	ACTIVE	0.472	2.487	0	0	0	47.601
Stage 6	-4.1	105.554	49.822	ACTIVE	0.472	2.487	0	0	0	49.822
Stage 6	-4.3	110.765	52.281	ACTIVE	0.472	2.487	0	0	0	52.281
Stage 6	-4.5	115.512	54.521	ACTIVE	0.472	2.487	0	0	0	54.521
Stage 6	-4.7	120.609	56.927	ACTIVE	0.472	2.487	0	0	0	56.927
Stage 6	-4.9	125.371	59.175	ACTIVE	0.472	2.487	0	0	0	59.175
Stage 6	-5.1	130.382	61.54	ACTIVE	0.472	2.487	0	0	0	61.54
Stage 6	-5.3	135.187	63.808	ACTIVE	0.472	2.487	0	0	0	63.808
Stage 6	-5.5	140.084	66.12	ACTIVE	0.472	2.487	0	0	0	66.12
Stage 6	-5.7	144.935	68.409	ACTIVE	0.472	2.487	0	0	0	68.409
Stage 6	-5.9	149.719	70.667	ACTIVE	0.472	2.487	0	0	0	70.667
Stage 6	-6.1	154.616	72.979	ACTIVE	0.472	2.487	0	0	0	72.979
Stage 6	-6.3	159.288	75.184	ACTIVE	0.472	2.487	0	0	0	75.184
Stage 6	-6.5	164.233	77.518	ACTIVE	0.472	2.487	0	0	0	77.518
Stage 6	-6.7	168.793	79.67	ACTIVE	0.472	2.487	0	0	0	79.67
Stage 6	-6.9	173.788	82.028	ACTIVE	0.472	2.487	0	0	0	82.028
Stage 6	-7.1	177.238	1.314	ACTIVE	0.333	4.409	50	1	0	2.314
Stage 6	-7.3	179.024	1.909	ACTIVE	0.333	4.399	50	3	0	4.909
Stage 6	-7.5	180.826	2.509	ACTIVE	0.333	4.388	50	5	0	7.509
Stage 6	-7.7	182.643	3.114	ACTIVE	0.333	4.378	50	7	0	10.114
Stage 6	-7.9	184.472	3.723	ACTIVE	0.333	4.368	50	9	0	12.723
Stage 6	-8.1	186.313	4.336	ACTIVE	0.333	4.358	50	11	0	15.336
Stage 6	-8.3	188.164	4.952	ACTIVE	0.333	4.348	50	13	0	17.952
Stage 6	-8.5	190.024	5.572	ACTIVE	0.333	4.339	50	15	0	20.572
Stage 6	-8.7	191.892	6.194	ACTIVE	0.333	4.329	50	17	0	23.194
Stage 6	-8.9	193.767	10.007	UL-RL	0.333	4.32	50	19	0	29.007
Stage 6	-9.1	195.649	20.033	UL-RL	0.333	4.311	50	21	0	41.033
Stage 6	-9.3	197.647	29.307	UL-RL	0.333	4.301	50	23	0	52.307
Stage 6	-9.5	199.972	37.836	UL-RL	0.333	4.29	50	25	0	62.836
Stage 6	-9.7	202.283	45.636	UL-RL	0.333	4.28	50	27	0	72.636
Stage 6	-9.9	205.482	52.727	UL-RL	0.333	4.265	50	29	0	81.727
Stage 6	-10.1	207.749	59.137	UL-RL	0.333	4.255	50	31	0	90.137
Stage 6	-10.3	210.005	64.898	UL-RL	0.333	4.246	50	33	0	97.898
Stage 6	-10.5	212.25	70.044	UL-RL	0.333	4.237	50	35	0	105.044
Stage 6	-10.7	214.484	74.612	UL-RL	0.333	4.227	50	37	0	111.612
Stage 6	-10.9	216.708	78.642	UL-RL	0.333	4.219	50	39	0	117.642
Stage 6	-11.1	218.923	82.172	UL-RL	0.333	4.21	50	41	0	123.172
Stage 6	-11.3	221.129	85.242	UL-RL	0.333	4.201	50	43	0	128.242
Stage 6	-11.5	223.325	87.892	UL-RL	0.333	4.193	50	45	0	132.892
Stage 6	-11.7	226.278	90.16	UL-RL	0.333	4.182	50	47	0	137.16
Stage 6	-11.9	228.446	92.084	UL-RL	0.333	4.175	50	49	0	141.084
Stage 6	-12.1	230.607	93.7	UL-RL	0.333	4.167	50	51	0	144.7
Stage 6	-12.3	232.761	95.042	UL-RL	0.333	4.16	50	53	0	148.041
Stage 6	-12.5	234.908	96.142	UL-RL	0.333	4.152	50	55	0	151.142
Stage 6	-12.7	237.048	97.032	UL-RL	0.333	4.145	50	57	0	154.032
Stage 6	-12.9	239.183	97.74	UL-RL	0.333	4.138	50	59	0	156.74
Stage 6	-13.1	241.311	98.293	UL-RL	0.333	4.131	50	61	0	159.293

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Sigma V (kPa)	Muro: Sigma H (kPa)	LEFT		Lato		LEFT			
				Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 6	-13.3	243.434	98.715	UL-RL	0.333	4.125	50	63	0	0	161.715
Stage 6	-13.5	246.214	99.028	UL-RL	0.333	4.116	50	65	0	0	164.028
Stage 6	-13.7	248.316	99.252	UL-RL	0.333	4.11	50	67	0	0	166.252
Stage 6	-13.9	250.414	99.406	UL-RL	0.333	4.104	50	69	0	0	168.406
Stage 6	-14.1	252.507	99.506	UL-RL	0.333	4.097	50	71	0	0	170.506
Stage 6	-14.3	254.596	99.567	UL-RL	0.333	4.091	50	73	0	0	172.567
Stage 6	-14.5	256.68	99.601	UL-RL	0.333	4.085	50	75	0	0	174.601
Stage 6	-14.7	258.76	99.619	UL-RL	0.333	4.08	50	77	0	0	176.619
Stage 6	-14.9	260.836	99.631	UL-RL	0.333	4.074	50	79	0	0	178.631
Stage 6	-15.1	262.908	99.645	UL-RL	0.333	4.068	50	81	0	0	180.645
Stage 6	-15.3	265.561	99.667	UL-RL	0.333	4.061	50	83	0	0	182.667
Stage 6	-15.5	267.618	99.703	UL-RL	0.333	4.056	50	85	0	0	184.703
Stage 6	-15.7	269.672	99.758	UL-RL	0.333	4.051	50	87	0	0	186.758
Stage 6	-15.9	271.722	99.835	UL-RL	0.333	4.045	50	89	0	0	188.834
Stage 6	-16.1	273.77	99.935	UL-RL	0.333	4.04	50	91	0	0	190.935
Stage 6	-16.3	275.814	100.062	UL-RL	0.333	4.035	50	93	0	0	193.062
Stage 6	-16.5	277.855	100.215	UL-RL	0.333	4.03	50	95	0	0	195.215
Stage 6	-16.7	279.894	100.395	UL-RL	0.333	4.026	50	97	0	0	197.395
Stage 6	-16.9	281.929	100.603	UL-RL	0.333	4.021	50	99	0	0	199.602
Stage 6	-17.1	284.486	100.836	UL-RL	0.333	4.015	50	101	0	0	201.836
Stage 6	-17.3	286.51	101.094	UL-RL	0.333	4.01	50	103	0	0	204.094
Stage 6	-17.5	288.532	101.376	UL-RL	0.333	4.006	50	105	0	0	206.376
Stage 6	-17.7	290.552	101.68	UL-RL	0.333	4.001	50	107	0	0	208.68
Stage 6	-17.9	292.57	102.003	UL-RL	0.333	3.997	50	109	0	0	211.003
Stage 6	-18.1	294.585	102.345	UL-RL	0.333	3.993	50	111	0	0	213.345
Stage 6	-18.3	296.598	102.703	UL-RL	0.333	3.988	50	113	0	0	215.703
Stage 6	-18.5	298.608	103.075	UL-RL	0.333	3.984	50	115	0	0	218.075
Stage 6	-18.7	300.617	103.458	UL-RL	0.333	3.98	50	117	0	0	220.458
Stage 6	-18.9	303.098	103.852	UL-RL	0.333	3.975	50	119	0	0	222.852
Stage 6	-19.1	305.098	104.254	UL-RL	0.333	3.971	50	121	0	0	225.254
Stage 6	-19.3	307.097	104.663	UL-RL	0.333	3.967	50	123	0	0	227.663
Stage 6	-19.5	309.094	105.076	UL-RL	0.333	3.963	50	125	0	0	230.076
Stage 6	-19.7	311.088	105.494	UL-RL	0.333	3.959	50	127	0	0	232.494
Stage 6	-19.9	313.082	105.915	UL-RL	0.333	3.955	50	129	0	0	234.915
Stage 6	-20	314.302	106.127	UL-RL	0.333	3.953	50	130	0	0	236.127

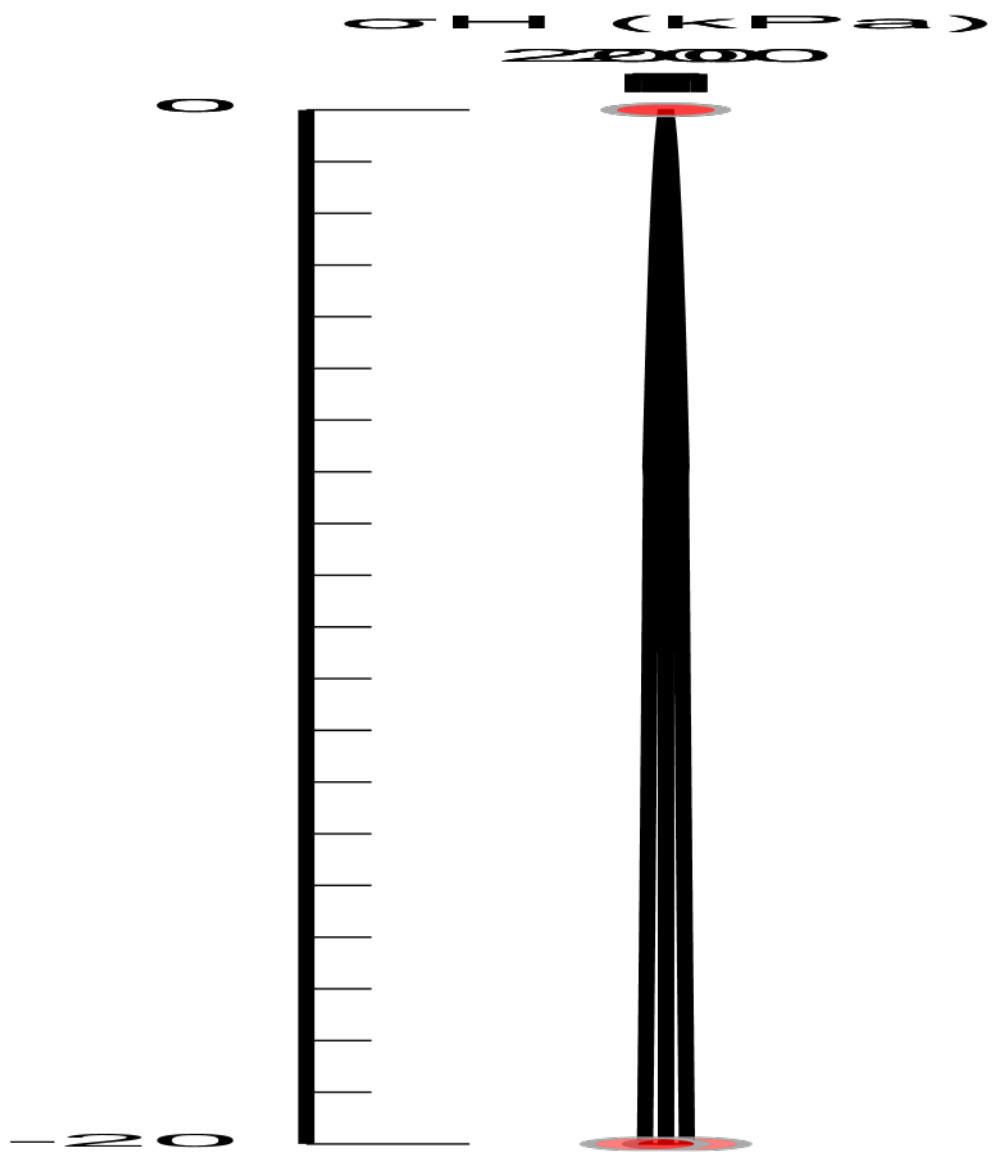
Design Assumption: Nominal Risultati Terreno			Muro:	LEFT	Lato	RIGHT					
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 6	0	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-0.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-0.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-0.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-1.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-1.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-1.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-1.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-1.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-2.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-2.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-2.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-2.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-2.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-3.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-3.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-3.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-3.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-3.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-4.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-4.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-4.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-4.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-4.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-5.1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-5.3	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-5.5	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-5.7	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-5.9	0	0	REMOVED	0	0	0	0	0	0	0
Stage 6	-6.1	1.95	3.655	PASSIVE	0.472	1.874	0	0	0	0	3.655
Stage 6	-6.3	5.85	10.965	PASSIVE	0.472	1.874	0	0	0	0	10.965
Stage 6	-6.5	9.75	18.274	PASSIVE	0.472	1.874	0	0	0	0	18.274
Stage 6	-6.7	13.65	25.584	PASSIVE	0.472	1.874	0	0	0	0	25.584
Stage 6	-6.9	17.55	32.894	PASSIVE	0.472	1.874	0	0	0	0	32.894
Stage 6	-7.1	20.45	150.215	V-C	0.333	3.345	52.874	1	0	0	151.215
Stage 6	-7.3	22.35	144.873	V-C	0.333	3.25	52.874	3	0	0	147.873
Stage 6	-7.5	24.25	139.624	V-C	0.333	3.169	52.874	5	0	0	144.624
Stage 6	-7.7	26.15	134.516	V-C	0.333	3.1	52.874	7	0	0	141.516
Stage 6	-7.9	28.05	129.59	V-C	0.333	3.041	52.874	9	0	0	138.59
Stage 6	-8.1	29.95	124.881	V-C	0.333	2.989	52.874	11	0	0	135.881
Stage 6	-8.3	31.85	120.416	V-C	0.333	2.943	52.874	13	0	0	133.416
Stage 6	-8.5	33.75	116.218	V-C	0.333	2.903	52.874	15	0	0	131.218
Stage 6	-8.7	35.65	112.304	V-C	0.333	2.866	52.874	17	0	0	129.304
Stage 6	-8.9	37.55	108.686	V-C	0.333	2.834	52.874	19	0	0	127.686
Stage 6	-9.1	39.45	105.369	V-C	0.333	2.804	52.874	21	0	0	126.369
Stage 6	-9.3	41.35	102.357	V-C	0.333	2.778	52.874	23	0	0	125.357
Stage 6	-9.5	43.25	99.648	V-C	0.333	2.753	52.874	25	0	0	124.648
Stage 6	-9.7	45.15	97.236	V-C	0.333	2.731	52.874	27	0	0	124.236
Stage 6	-9.9	47.05	93.777	UL-RL	0.333	2.71	52.874	29	0	0	122.777
Stage 6	-10.1	48.95	90.52	UL-RL	0.333	2.691	52.874	31	0	0	121.52
Stage 6	-10.3	50.85	87.689	UL-RL	0.333	2.674	52.874	33	0	0	120.689
Stage 6	-10.5	52.75	85.262	UL-RL	0.333	2.658	52.874	35	0	0	120.262
Stage 6	-10.7	54.65	83.215	UL-RL	0.333	2.642	52.874	37	0	0	120.215
Stage 6	-10.9	56.55	81.524	UL-RL	0.333	2.628	52.874	39	0	0	120.524
Stage 6	-11.1	58.45	80.162	UL-RL	0.333	2.615	52.874	41	0	0	121.162
Stage 6	-11.3	60.35	79.104	UL-RL	0.333	2.603	52.874	43	0	0	122.104
Stage 6	-11.5	62.25	78.325	UL-RL	0.333	2.591	52.874	45	0	0	123.325
Stage 6	-11.7	64.15	77.798	UL-RL	0.333	2.58	52.874	47	0	0	124.798
Stage 6	-11.9	66.05	77.501	UL-RL	0.333	2.57	52.874	49	0	0	126.5
Stage 6	-12.1	67.95	77.408	UL-RL	0.333	2.56	52.874	51	0	0	128.408
Stage 6	-12.3	69.85	77.498	UL-RL	0.333	2.551	52.874	53	0	0	130.498
Stage 6	-12.5	71.75	77.749	UL-RL	0.333	2.542	52.874	55	0	0	132.748
Stage 6	-12.7	73.65	78.141	UL-RL	0.333	2.534	52.874	57	0	0	135.14
Stage 6	-12.9	75.55	78.655	UL-RL	0.333	2.526	52.874	59	0	0	137.655
Stage 6	-13.1	77.45	79.275	UL-RL	0.333	2.519	52.874	61	0	0	140.274
Stage 6	-13.3	79.35	79.983	UL-RL	0.333	2.512	52.874	63	0	0	142.983
Stage 6	-13.5	81.25	80.766	UL-RL	0.333	2.505	52.874	65	0	0	145.766
Stage 6	-13.7	83.15	81.61	UL-RL	0.333	2.498	52.874	67	0	0	148.61

Design Assumption: Nominal Risultati Terreno											
Stage	Z (m)	Muro:		LEFT	Lato		RIGHT				
		Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente U* (kPa)	Peq (kPa)	
Stage 6	-13.9	85.05	82.503	UL-RL	0.333	2.492	52.874	69	0	0	151.503
Stage 6	-14.1	86.95	83.435	UL-RL	0.333	2.486	52.874	71	0	0	154.435
Stage 6	-14.3	88.85	84.396	UL-RL	0.333	2.481	52.874	73	0	0	157.396
Stage 6	-14.5	90.75	85.378	UL-RL	0.333	2.475	52.874	75	0	0	160.378
Stage 6	-14.7	92.65	86.373	UL-RL	0.333	2.47	52.874	77	0	0	163.373
Stage 6	-14.9	94.55	87.375	UL-RL	0.333	2.465	52.874	79	0	0	166.375
Stage 6	-15.1	96.45	88.379	UL-RL	0.333	2.46	52.874	81	0	0	169.379
Stage 6	-15.3	98.35	89.382	UL-RL	0.333	2.456	52.874	83	0	0	172.382
Stage 6	-15.5	100.25	90.378	UL-RL	0.333	2.451	52.874	85	0	0	175.378
Stage 6	-15.7	102.15	91.365	UL-RL	0.333	2.447	52.874	87	0	0	178.365
Stage 6	-15.9	104.05	92.342	UL-RL	0.333	2.443	52.874	89	0	0	181.342
Stage 6	-16.1	105.95	93.306	UL-RL	0.333	2.439	52.874	91	0	0	184.306
Stage 6	-16.3	107.85	94.257	UL-RL	0.333	2.435	52.874	93	0	0	187.257
Stage 6	-16.5	109.75	95.193	UL-RL	0.333	2.431	52.874	95	0	0	190.193
Stage 6	-16.7	111.65	96.116	UL-RL	0.333	2.428	52.874	97	0	0	193.116
Stage 6	-16.9	113.55	97.024	UL-RL	0.333	2.424	52.874	99	0	0	196.024
Stage 6	-17.1	115.45	97.919	UL-RL	0.333	2.421	52.874	101	0	0	198.919
Stage 6	-17.3	117.35	98.801	UL-RL	0.333	2.418	52.874	103	0	0	201.801
Stage 6	-17.5	119.25	99.671	UL-RL	0.333	2.415	52.874	105	0	0	204.671
Stage 6	-17.7	121.15	100.531	UL-RL	0.333	2.412	52.874	107	0	0	207.531
Stage 6	-17.9	123.05	101.381	UL-RL	0.333	2.409	52.874	109	0	0	210.381
Stage 6	-18.1	124.95	102.223	UL-RL	0.333	2.406	52.874	111	0	0	213.223
Stage 6	-18.3	126.85	103.059	UL-RL	0.333	2.403	52.874	113	0	0	216.059
Stage 6	-18.5	128.75	103.889	UL-RL	0.333	2.401	52.874	115	0	0	218.889
Stage 6	-18.7	130.65	104.715	UL-RL	0.333	2.398	52.874	117	0	0	221.715
Stage 6	-18.9	132.55	105.538	UL-RL	0.333	2.395	52.874	119	0	0	224.538
Stage 6	-19.1	134.45	106.36	UL-RL	0.333	2.393	52.874	121	0	0	227.36
Stage 6	-19.3	136.35	107.182	UL-RL	0.333	2.391	52.874	123	0	0	230.182
Stage 6	-19.5	138.25	108.003	UL-RL	0.333	2.388	52.874	125	0	0	233.003
Stage 6	-19.7	140.15	108.826	UL-RL	0.333	2.386	52.874	127	0	0	235.826
Stage 6	-19.9	142.05	109.651	UL-RL	0.333	2.384	52.874	129	0	0	238.651
Stage 6	-20	143	110.064	UL-RL	0.333	2.383	52.874	130	0	0	240.064

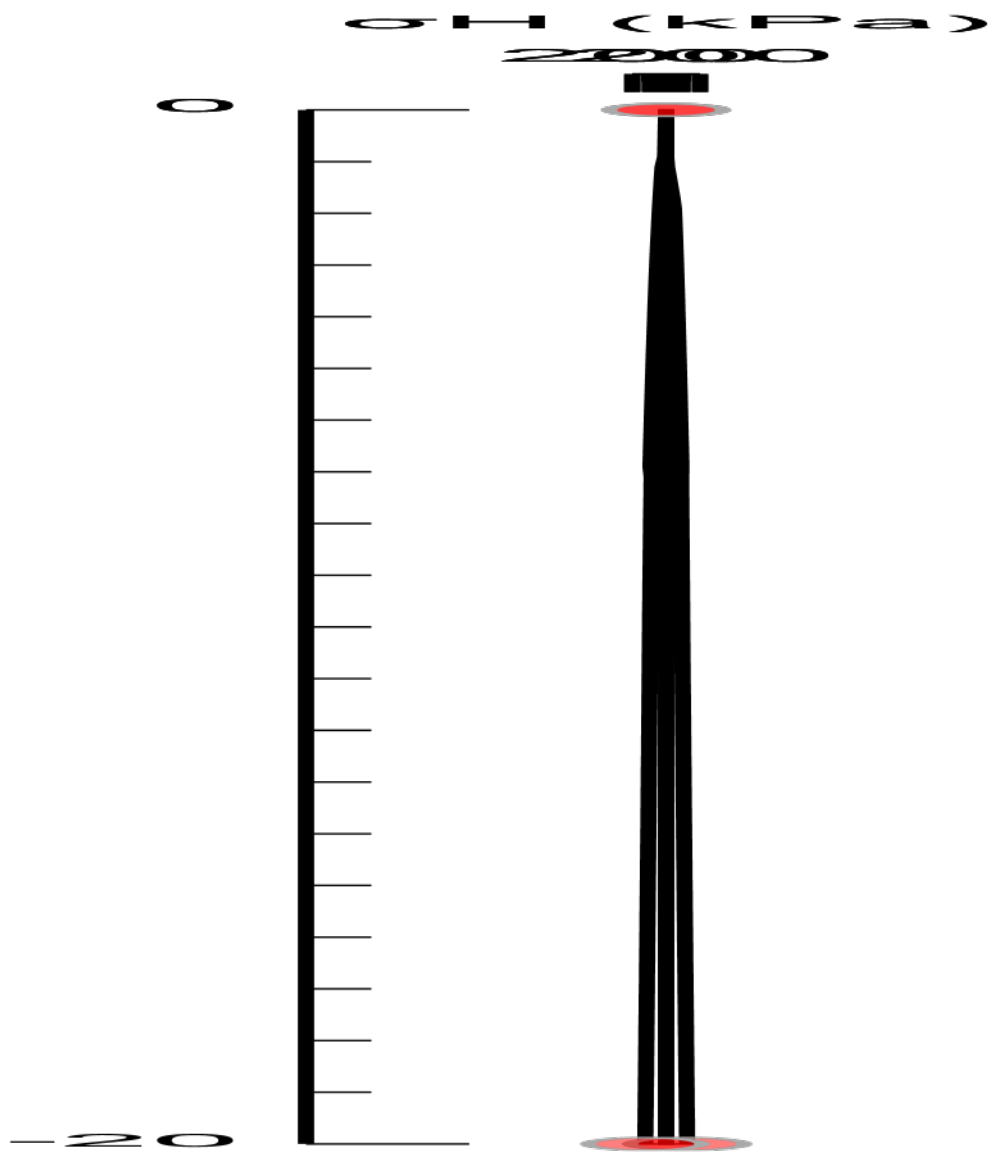
5.6. Grafico Risultati Terreno Sigma H



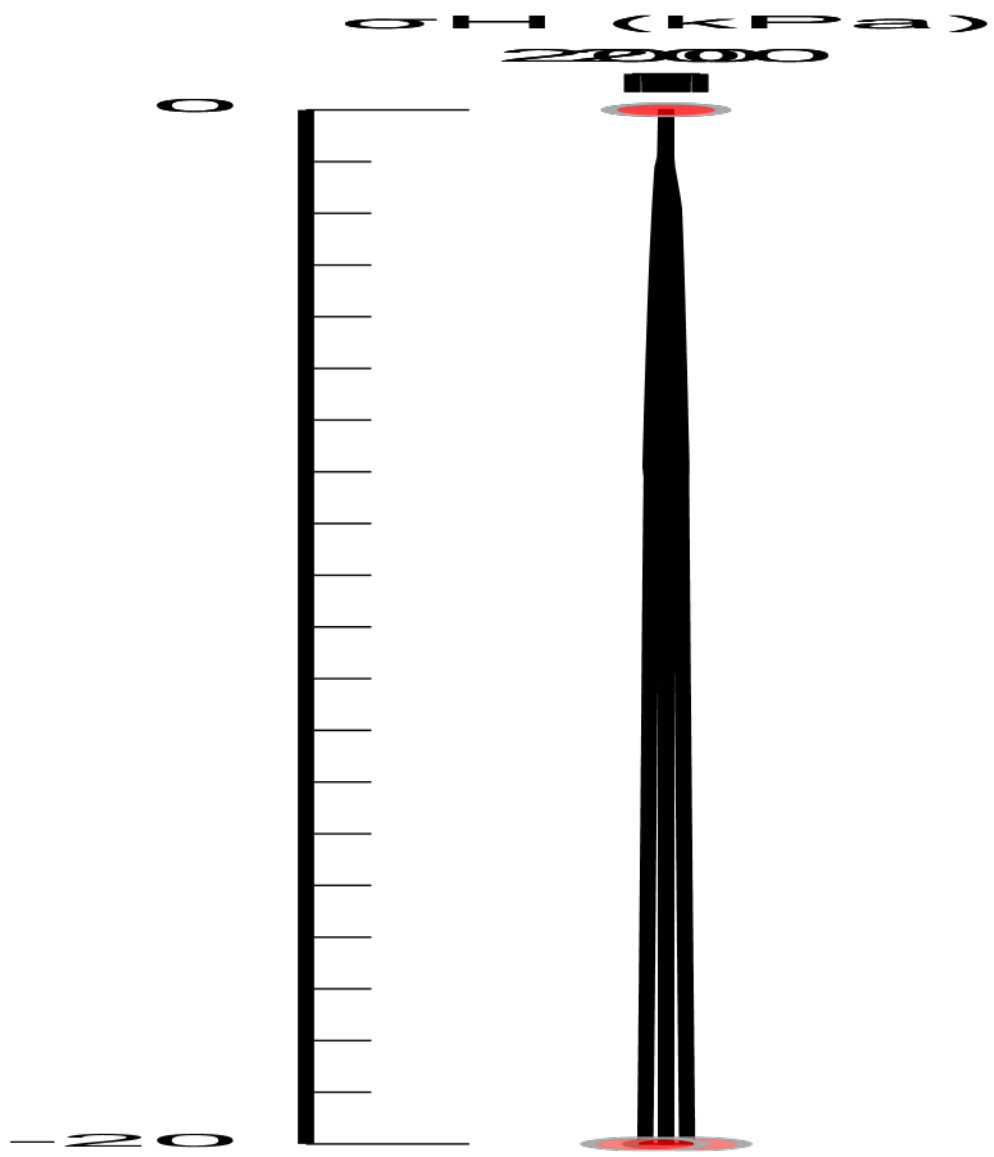
Design Assumption: Nominal
Stage: Stage 1
Muro: Left Wall
Sigma H



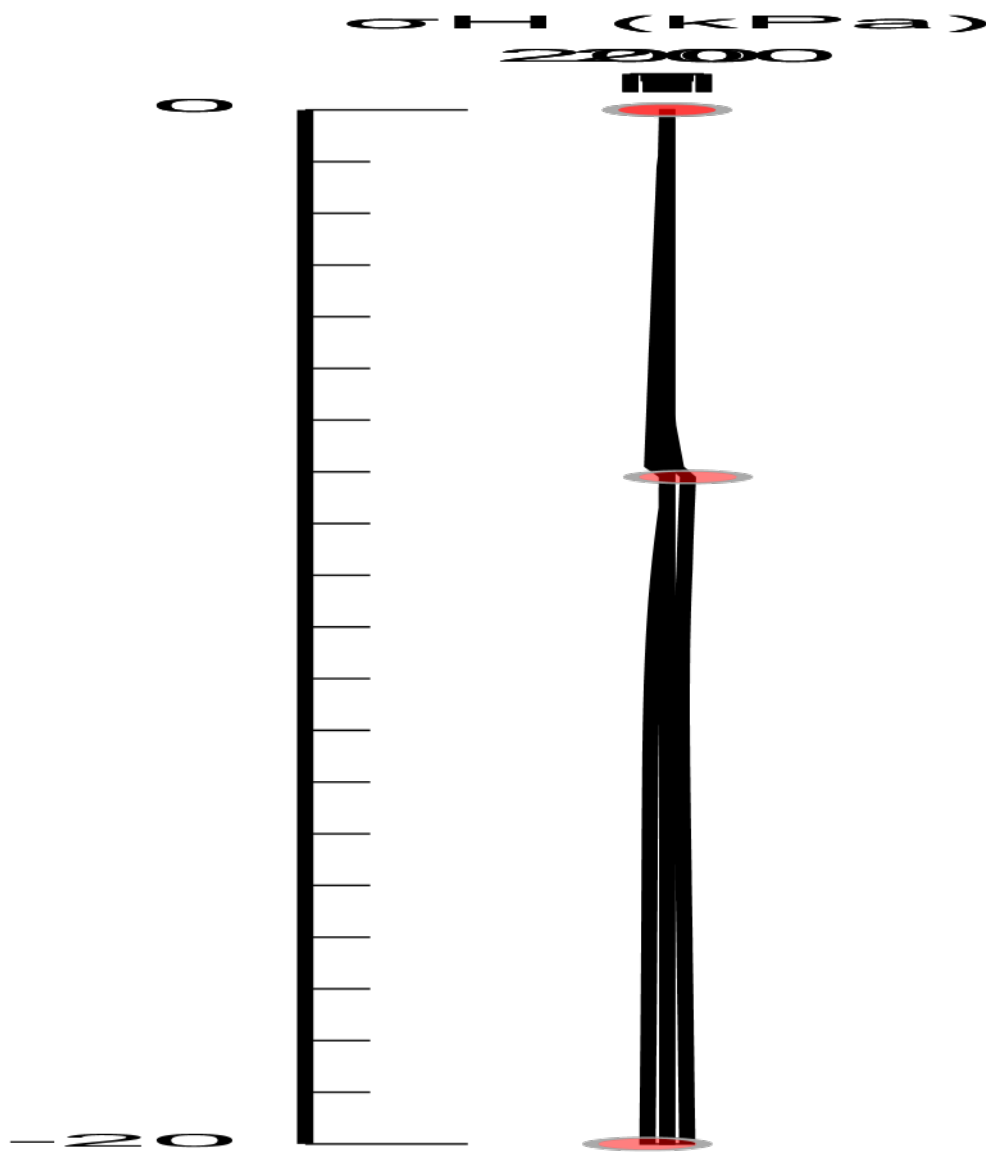
Design Assumption: Nominal
 Stage: Stage 2
 Muro: Left Wall
 Sigma H



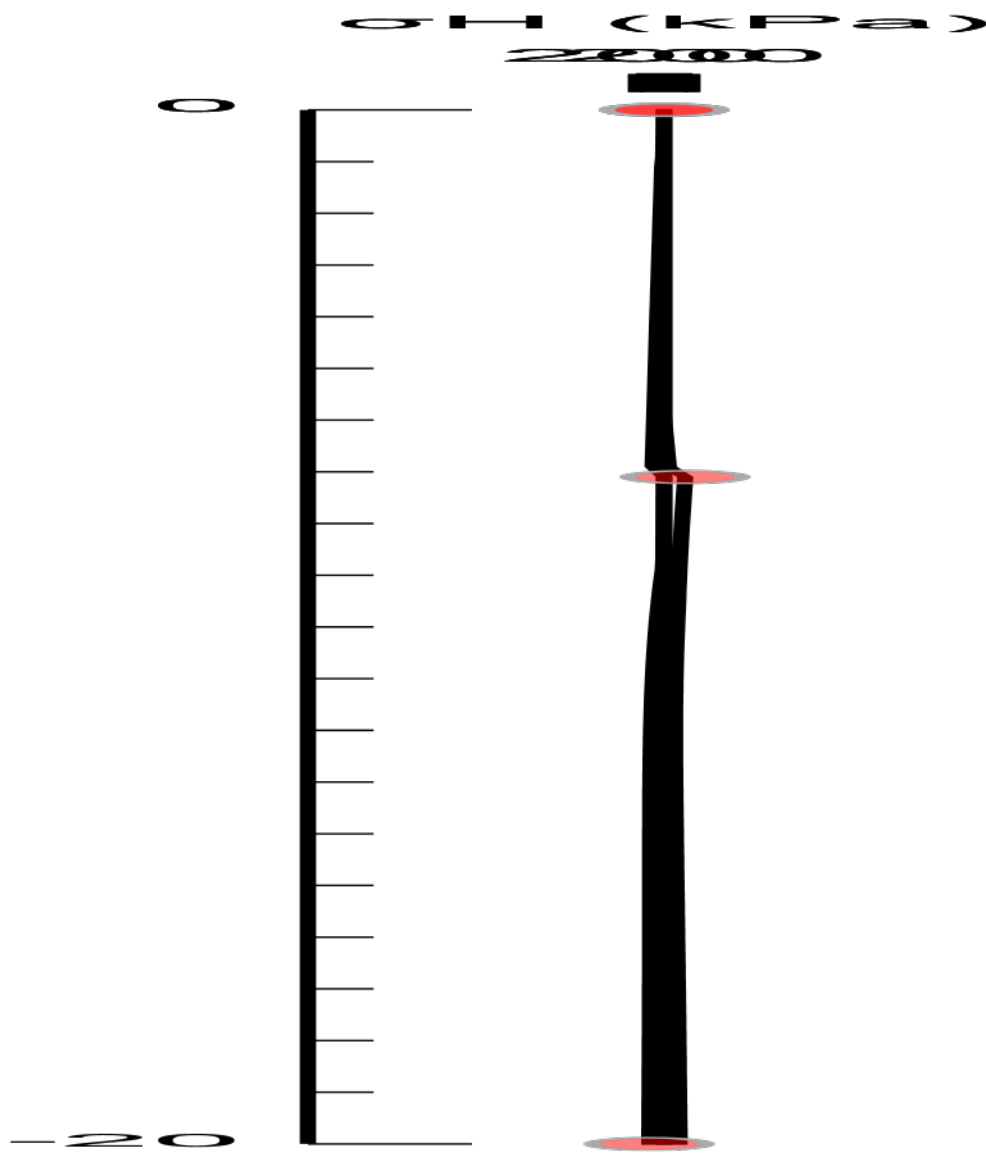
Design Assumption: Nominal
 Stage: Stage 3
 Muro: Left Wall
 Sigma H



Design Assumption: Nominal
 Stage: Stage 4
 Muro: Left Wall
 Sigma H



Design Assumption: Nominal
 Stage: Stage 5
 Muro: Left Wall
 Sigma H



Design Assumption: Nominal
 Stage: Stage 6
 Muro: Left Wall
 Sigma H

5.6. Riepilogo spinte

Design Assump- tion: Nominal	Tipo Risultato: Riepi- logo spinte	Muro:	LEFT	Lato	LEFT		
Stage	Vera effettiva (kN/m)	Pressione neutra (kN/m)	Vera Totale (kN/m)	Min ammissibile (kN/m)	Max ammissibile (kN/m)	Percentuale di resi- stenza massima	Vera / Attiva
Stage 1	1811.1	845	2656.2	604.8	19347.6	9.36%	2.99
Stage 2	1811.1	845	2656.2	604.8	19347.6	9.36%	2.99
Stage 3	1737.9	845	2582.9	604.8	19347.6	8.98%	2.87
Stage 4	1737.8	845	2582.9	604.8	19347.6	8.98%	2.87
Stage 5	1336.4	845	2181.4	604.8	19347.6	6.91%	2.21
Stage 6	1300.8	845	2145.9	604.8	17386.6	7.48%	2.15

Design Assump- tion: Nominal	Tipo Risultato: Riepi- logo spinte	Muro:	LEFT	Lato	RIGHT		
Stage	Vera effettiva (kN/m)	Pressione neutra (kN/m)	Vera Totale (kN/m)	Min ammissibile (kN/m)	Max ammissibile (kN/m)	Percentuale di resi- stenza massima	Vera / At- tiva
Stage 1	1811.1	845	2656.2	358.3	16135.7	11.22%	5.05
Stage 2	1811.1	845	2656.2	358.3	16135.7	11.22%	5.05
Stage 3	1737.8	845	2582.9	244.8	14537.6	11.95%	7.1
Stage 4	1737.8	845	2582.9	244.8	14537.6	11.95%	7.1
Stage 5	1234.9	845	2080	4.6	7726.7	15.98%	268.46
Stage 6	1279.7	845	2124.7	4.6	4875.6	26.25%	278.2