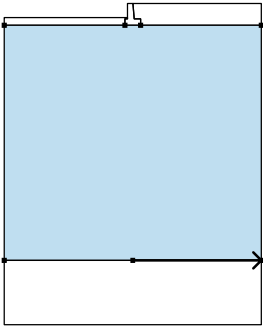
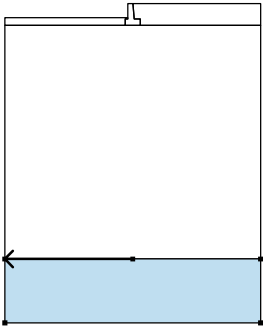


ქვედა საყრდენი კედელი h-1.2მ

No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
4		0.00	-20.00	10.00	-20.00	
		10.00	-1.70	0.60	-1.70	
		-0.60	-1.70	-10.00	-1.70	
		-10.00	-20.00			
5		0.00	-20.00	-10.00	-20.00	
		-10.00	-25.00	10.00	-25.00	
		10.00	-20.00			

Surcharge

No.	Type	Type of action	Location z [m]	Origin x [m]	Length l [m]	Width b [m]	Slope α [°]	Magnitude		
								q, q ₁ , f, F	q ₂	unit
1	strip	variable	on terrain	x = 3.20	l = 0.80		0.00	196.00		kN/m ²
2	strip	variable	on terrain	x = 5.00	l = 0.80		0.00	196.00		kN/m ²

Surcharges

No.	Name
1	HK80

Water

Water type : No water

Tensile crack

Tensile crack not inputted.

EarthquakeHorizontal seismic coefficient : $K_h = 0.08$ Vertical seismic coefficient : $K_v = 0.20$ **Settings of the stage of construction**

Design situation : seismic

Results (Stage of construction 1)**Analysis 1****Circular slip surface**

Slip surface parameters					
Center :	x =	-0.26 [m]	Angles :	$\alpha_1 =$	-58.46 [°]
	z =	2.29 [m]		$\alpha_2 =$	69.30 [°]
Radius :	R =	6.48 [m]			
The slip surface after optimization.					

ქვედა საყრდენი კედელი h-1.2მ

Slope stability verification (Bishop)Sum of active forces : $F_a = 305.22 \text{ kN/m}$ Sum of passive forces : $F_p = 1246.96 \text{ kN/m}$ Sliding moment : $M_a = 1977.81 \text{ kNm/m}$ Resisting moment : $M_p = 8080.28 \text{ kNm/m}$ Factor of safety = $4.09 > 1.00$ **Slope stability ACCEPTABLE****Optimization of circular slip surface (Bishop)**

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
1	-0.17	0.39	6.01	4.81	ACCEPTABLE
2	-0.17	0.39	6.01	4.81	ACCEPTABLE
3	2.46	14.20	15.96	367.13	ACCEPTABLE
4	-0.34	5.05	11.28	8.55	ACCEPTABLE
5	-0.32	4.67	11.10	8.59	ACCEPTABLE
6	3.75	0.39	6.01	24.40	ACCEPTABLE
7	-0.07	0.29	9.82	8.92	ACCEPTABLE
8	-4.52	5.51	8.46	237.58	ACCEPTABLE
9	-0.44	0.73	2.45	454.28	ACCEPTABLE
10	-4.03	0.33	5.94	20.58	ACCEPTABLE
11	-0.42	6.37	11.99	8.51	ACCEPTABLE
12	-13.11	78.92	80.33	2262.94	ACCEPTABLE
13	-19.87	310.59	311.99	517.22	ACCEPTABLE
14	-9.19	78.92	80.33	464.14	ACCEPTABLE
15	-0.17	0.39	6.01	4.81	ACCEPTABLE
16	-0.96	13.07	16.10	9.51	ACCEPTABLE
17	1.98	5.39	8.42	8.34	ACCEPTABLE
18	-0.35	3.57	9.49	6.36	ACCEPTABLE
19	-0.33	3.31	9.38	6.40	ACCEPTABLE
20	2.44	0.39	6.01	9.72	ACCEPTABLE
21	-0.14	0.36	8.59	7.63	ACCEPTABLE
22	-3.08	3.59	7.25	15.56	ACCEPTABLE
23	-0.26	0.50	3.51	15.71	ACCEPTABLE
24	-2.78	0.39	6.01	16.95	ACCEPTABLE
25	-0.38	4.11	9.73	6.30	ACCEPTABLE
26	-14.22	106.86	108.27	1265.53	ACCEPTABLE
27	-18.73	261.30	262.71	528.10	ACCEPTABLE
28	-11.61	106.86	108.27	555.96	ACCEPTABLE
29	-0.17	0.39	6.01	4.81	ACCEPTABLE
30	-0.60	6.63	10.52	5.74	ACCEPTABLE
31	1.32	3.08	6.97	5.55	ACCEPTABLE
32	-0.30	2.50	8.26	5.78	ACCEPTABLE
33	-0.29	2.35	8.20	5.81	ACCEPTABLE
34	1.57	0.39	6.01	6.50	ACCEPTABLE
35	-0.15	0.36	7.73	6.69	ACCEPTABLE
36	-2.11	2.48	6.67	5.74	ACCEPTABLE
37	-0.21	0.44	4.32	5.11	ACCEPTABLE
38	-1.91	0.39	6.01	6.66	ACCEPTABLE
39	-1.88	0.07	5.97	6.96	ACCEPTABLE
40	-0.32	2.72	8.34	5.73	ACCEPTABLE
41	1.60	0.11	5.97	6.75	ACCEPTABLE
42	-14.97	127.86	129.27	1082.21	ACCEPTABLE
43	-17.98	230.82	232.23	572.61	ACCEPTABLE
44	-13.23	127.86	129.27	639.45	ACCEPTABLE
45	-0.17	0.39	6.01	4.81	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
46	-0.43	3.93	8.40	5.10	ACCEPTABLE
47	0.84	2.00	6.47	5.04	ACCEPTABLE
48	-0.26	1.79	7.47	5.40	ACCEPTABLE
49	-0.26	1.70	7.44	5.42	ACCEPTABLE
50	0.99	0.39	6.01	5.69	ACCEPTABLE
51	-0.15	0.37	7.15	6.03	ACCEPTABLE
52	-1.46	1.77	6.38	6.14	ACCEPTABLE
53	-0.19	0.42	4.88	5.98	ACCEPTABLE
54	-1.33	0.39	6.01	6.82	ACCEPTABLE
55	-1.32	0.24	5.99	6.94	ACCEPTABLE
56	-0.27	1.88	7.50	5.37	ACCEPTABLE
57	1.00	0.27	5.99	5.77	ACCEPTABLE
58	-15.47	142.91	144.32	919.44	ACCEPTABLE
59	-17.47	211.55	212.96	617.24	ACCEPTABLE
60	-14.31	142.91	144.32	666.86	ACCEPTABLE
61	-0.17	0.39	6.01	4.81	ACCEPTABLE
62	0.62	0.17	5.98	5.43	ACCEPTABLE
63	-0.34	2.54	7.39	4.85	ACCEPTABLE
64	0.51	1.40	6.25	4.85	ACCEPTABLE
65	-0.24	1.32	6.96	5.14	ACCEPTABLE
66	-0.23	1.27	6.95	5.16	ACCEPTABLE
67	0.60	0.39	6.01	5.29	ACCEPTABLE
68	-0.16	0.38	6.77	5.58	ACCEPTABLE
69	-1.03	1.30	6.22	6.28	ACCEPTABLE
70	-0.19	0.41	5.25	6.34	ACCEPTABLE
71	-0.94	0.39	6.01	6.79	ACCEPTABLE
72	-0.92	0.13	5.98	7.01	ACCEPTABLE
73	-0.94	0.32	6.00	6.87	ACCEPTABLE
74	-0.24	1.35	6.97	5.13	ACCEPTABLE
75	0.61	0.34	6.00	5.32	ACCEPTABLE
76	-15.80	153.41	154.82	812.15	ACCEPTABLE
77	-17.14	199.17	200.58	619.38	ACCEPTABLE
78	-15.03	153.41	154.82	654.99	ACCEPTABLE
79	-0.17	0.39	6.01	4.81	ACCEPTABLE
80	0.35	0.30	6.00	5.13	ACCEPTABLE
81	-0.28	1.74	6.85	4.76	ACCEPTABLE
82	0.24	1.67	6.83	5.14	ACCEPTABLE
83	-0.40	3.44	8.03	5.00	ACCEPTABLE
84	0.16	2.58	7.18	4.95	ACCEPTABLE
85	-0.33	2.50	7.61	5.10	ACCEPTABLE
86	0.30	1.00	6.64	5.38	ACCEPTABLE
87	-0.32	2.44	7.59	5.12	ACCEPTABLE
88	0.24	1.74	6.85	5.12	ACCEPTABLE
89	-0.26	1.70	7.32	5.29	ACCEPTABLE
90	-0.23	1.03	6.15	4.49	ACCEPTABLE
91	0.29	0.94	6.13	4.81	ACCEPTABLE
92	-0.35	2.57	7.17	4.60	ACCEPTABLE
93	0.22	1.78	6.39	4.56	ACCEPTABLE
94	-0.28	1.72	6.85	4.77	ACCEPTABLE
95	0.35	0.36	6.01	5.10	ACCEPTABLE
96	-0.27	1.68	6.83	4.78	ACCEPTABLE
97	0.29	1.03	6.15	4.78	ACCEPTABLE
98	-0.22	1.01	6.64	5.00	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
99	-0.18	0.37	5.51	5.59	ACCEPTABLE
100	-0.81	1.72	6.36	5.24	ACCEPTABLE
101	-0.25	1.06	5.66	5.21	ACCEPTABLE
102	-0.75	1.03	6.15	5.50	ACCEPTABLE
103	-0.40	0.08	5.72	5.95	ACCEPTABLE
104	-0.73	0.88	6.11	5.56	ACCEPTABLE
105	-0.17	0.35	5.50	5.59	ACCEPTABLE
106	-0.68	0.34	6.01	5.89	ACCEPTABLE
107	-0.74	0.98	6.14	5.50	ACCEPTABLE
108	-0.18	0.39	5.51	5.58	ACCEPTABLE
109	-0.28	1.73	6.85	4.77	ACCEPTABLE
110	0.29	1.02	6.15	4.79	ACCEPTABLE
111	-16.03	160.62	162.03	812.22	ACCEPTABLE
112	-16.92	191.13	192.54	707.55	ACCEPTABLE
113	-15.51	160.62	162.03	717.35	ACCEPTABLE
114	-0.23	1.03	6.15	4.49	ACCEPTABLE
115	0.12	1.00	6.14	4.70	ACCEPTABLE
116	-0.31	2.01	6.79	4.54	ACCEPTABLE
117	0.07	1.52	6.29	4.51	ACCEPTABLE
118	-0.26	1.49	6.61	4.67	ACCEPTABLE
119	0.16	0.58	6.05	4.89	ACCEPTABLE
120	-0.26	1.46	6.60	4.68	ACCEPTABLE
121	0.11	1.03	6.15	4.68	ACCEPTABLE
122	-0.22	1.01	6.48	4.85	ACCEPTABLE
123	-0.20	0.59	5.72	5.12	ACCEPTABLE
124	-0.62	1.49	6.28	4.90	ACCEPTABLE
125	-0.24	1.05	5.83	4.87	ACCEPTABLE
126	-0.57	1.03	6.15	5.06	ACCEPTABLE
127	-0.34	0.38	5.85	5.33	ACCEPTABLE
128	-0.16	0.18	5.65	5.41	ACCEPTABLE
129	-0.57	0.96	6.13	5.11	ACCEPTABLE
130	-0.19	0.58	5.71	5.12	ACCEPTABLE
131	-0.53	0.57	6.05	5.31	ACCEPTABLE
132	-0.57	1.01	6.14	5.08	ACCEPTABLE
133	-0.20	0.60	5.72	5.12	ACCEPTABLE
134	-0.26	1.49	6.61	4.67	ACCEPTABLE
135	0.11	1.03	6.15	4.68	ACCEPTABLE
136	-16.19	165.89	167.30	809.51	ACCEPTABLE
137	-16.79	186.25	187.66	666.59	ACCEPTABLE
138	-15.85	165.89	167.30	687.54	ACCEPTABLE
139	-0.23	1.03	6.15	4.49	ACCEPTABLE
140	0.00	1.02	6.15	4.62	ACCEPTABLE
141	-0.28	1.67	6.56	4.51	ACCEPTABLE
142	-0.03	1.35	6.24	4.50	ACCEPTABLE
143	-0.25	1.34	6.45	4.60	ACCEPTABLE
144	0.03	0.73	6.08	4.75	ACCEPTABLE
145	-0.25	1.32	6.45	4.61	ACCEPTABLE
146	0.00	1.03	6.15	4.62	ACCEPTABLE
147	-0.22	1.02	6.37	4.73	ACCEPTABLE
148	-0.21	0.74	5.86	4.86	ACCEPTABLE
149	-0.49	1.33	6.24	4.71	ACCEPTABLE
150	-0.24	1.04	5.93	4.72	ACCEPTABLE
151	-0.46	1.03	6.15	4.84	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
152	-0.31	0.59	5.94	5.01	ACCEPTABLE
153	-0.18	0.45	5.80	5.03	ACCEPTABLE
154	-0.46	0.99	6.14	4.86	ACCEPTABLE
155	-0.21	0.73	5.86	4.86	ACCEPTABLE
156	-0.43	0.72	6.08	4.98	ACCEPTABLE
157	-0.46	1.02	6.15	4.84	ACCEPTABLE
158	-0.21	0.74	5.86	4.86	ACCEPTABLE
159	-0.25	1.33	6.45	4.61	ACCEPTABLE
160	0.00	1.03	6.15	4.62	ACCEPTABLE
161	-16.29	169.20	170.61	759.85	ACCEPTABLE
162	-16.69	182.78	184.19	756.67	ACCEPTABLE
163	-16.06	169.20	170.61	740.33	ACCEPTABLE
164	-0.23	1.03	6.15	4.49	ACCEPTABLE
165	-0.08	1.03	6.15	4.57	ACCEPTABLE
166	-0.26	1.45	6.42	4.50	ACCEPTABLE
167	-0.10	1.24	6.21	4.50	ACCEPTABLE
168	-0.24	1.23	6.35	4.57	ACCEPTABLE
169	-0.06	0.83	6.10	4.66	ACCEPTABLE
170	-0.24	1.22	6.35	4.58	ACCEPTABLE
171	-0.08	1.03	6.15	4.57	ACCEPTABLE
172	-0.23	1.02	6.30	4.65	ACCEPTABLE
173	-0.22	0.84	5.95	4.71	ACCEPTABLE
174	-0.40	1.23	6.21	4.59	ACCEPTABLE
175	-0.23	1.04	6.01	4.59	ACCEPTABLE
176	-0.38	1.03	6.15	4.68	ACCEPTABLE
177	-0.28	0.73	6.00	4.79	ACCEPTABLE
178	-0.20	0.64	5.91	4.80	ACCEPTABLE
179	-0.38	1.01	6.14	4.70	ACCEPTABLE
180	-0.21	0.83	5.95	4.69	ACCEPTABLE
181	-0.36	0.82	6.10	4.77	ACCEPTABLE
182	-0.38	1.02	6.15	4.68	ACCEPTABLE
183	-0.22	0.83	5.95	4.71	ACCEPTABLE
184	-0.24	1.23	6.35	4.57	ACCEPTABLE
185	-0.08	1.03	6.15	4.57	ACCEPTABLE
186	-16.36	171.43	172.84	760.70	ACCEPTABLE
187	-16.62	180.48	181.89	757.11	ACCEPTABLE
188	-16.20	171.43	172.84	746.18	ACCEPTABLE
189	-0.23	1.03	6.15	4.49	ACCEPTABLE
190	-0.13	1.03	6.15	4.55	ACCEPTABLE
191	-0.25	1.31	6.32	4.48	ACCEPTABLE
192	-0.15	1.31	6.32	4.54	ACCEPTABLE
193	-0.27	1.60	6.51	4.50	ACCEPTABLE
194	-0.16	1.46	6.37	4.50	ACCEPTABLE
195	-0.26	1.45	6.46	4.54	ACCEPTABLE
196	-0.14	1.17	6.28	4.59	ACCEPTABLE
197	-0.26	1.44	6.46	4.55	ACCEPTABLE
198	-0.15	1.31	6.32	4.54	ACCEPTABLE
199	-0.25	1.30	6.42	4.59	ACCEPTABLE
200	-0.24	1.18	6.18	4.42	ACCEPTABLE
201	-0.14	1.18	6.18	4.48	ACCEPTABLE
202	-0.26	1.46	6.36	4.43	ACCEPTABLE
203	-0.15	1.32	6.22	4.43	ACCEPTABLE
204	-0.25	1.32	6.32	4.48	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
205	-0.13	1.04	6.14	4.53	ACCEPTABLE
206	-0.25	1.31	6.32	4.48	ACCEPTABLE
207	-0.14	1.18	6.18	4.48	ACCEPTABLE
208	-0.24	1.17	6.28	4.53	ACCEPTABLE
209	-0.23	1.05	6.05	4.53	ACCEPTABLE
210	-0.35	1.32	6.22	4.48	ACCEPTABLE
211	-0.24	1.19	6.08	4.48	ACCEPTABLE
212	-0.34	1.18	6.18	4.53	ACCEPTABLE
213	-0.27	0.97	6.08	4.59	ACCEPTABLE
214	-0.22	0.91	6.01	4.60	ACCEPTABLE
215	-0.34	1.17	6.18	4.54	ACCEPTABLE
216	-0.23	1.04	6.04	4.55	ACCEPTABLE
217	-0.33	1.04	6.14	4.60	ACCEPTABLE
218	-0.34	1.18	6.18	4.53	ACCEPTABLE
219	-0.23	1.05	6.05	4.53	ACCEPTABLE
220	-0.25	1.32	6.32	4.48	ACCEPTABLE
221	-0.14	1.18	6.18	4.48	ACCEPTABLE
222	-16.40	172.92	174.33	714.37	ACCEPTABLE
223	-16.58	178.95	180.36	712.48	ACCEPTABLE
224	-16.30	172.92	174.33	771.82	ACCEPTABLE
225	-0.24	1.18	6.18	4.42	ACCEPTABLE
226	-0.17	1.18	6.18	4.46	ACCEPTABLE
227	-0.26	1.37	6.30	4.42	ACCEPTABLE
228	-0.19	1.37	6.30	4.46	ACCEPTABLE
229	-0.28	1.56	6.43	4.44	ACCEPTABLE
230	-0.20	1.47	6.33	4.43	ACCEPTABLE
231	-0.27	1.47	6.39	4.45	ACCEPTABLE
232	-0.18	1.28	6.27	4.49	ACCEPTABLE
233	-0.27	1.46	6.39	4.46	ACCEPTABLE
234	-0.19	1.37	6.30	4.46	ACCEPTABLE
235	-0.26	1.37	6.36	4.49	ACCEPTABLE
236	-0.25	1.28	6.21	4.39	ACCEPTABLE
237	-0.18	1.28	6.21	4.43	ACCEPTABLE
238	-0.27	1.47	6.33	4.39	ACCEPTABLE
239	-0.19	1.38	6.24	4.39	ACCEPTABLE
240	-0.26	1.37	6.30	4.42	ACCEPTABLE
241	-0.17	1.19	6.18	4.46	ACCEPTABLE
242	-0.26	1.37	6.30	4.42	ACCEPTABLE
243	-0.18	1.28	6.21	4.43	ACCEPTABLE
244	-0.25	1.28	6.27	4.45	ACCEPTABLE
245	-0.24	1.19	6.12	4.43	ACCEPTABLE
246	-0.33	1.37	6.24	4.41	ACCEPTABLE
247	-0.25	1.28	6.15	4.40	ACCEPTABLE
248	-0.32	1.28	6.21	4.44	ACCEPTABLE
249	-0.27	1.14	6.14	4.47	ACCEPTABLE
250	-0.23	1.09	6.09	4.47	ACCEPTABLE
251	-0.32	1.27	6.21	4.45	ACCEPTABLE
252	-0.24	1.19	6.12	4.43	ACCEPTABLE
253	-0.31	1.18	6.18	4.48	ACCEPTABLE
254	-0.32	1.28	6.21	4.44	ACCEPTABLE
255	-0.24	1.19	6.12	4.43	ACCEPTABLE
256	-0.26	1.37	6.30	4.42	ACCEPTABLE
257	-0.18	1.28	6.21	4.43	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
258	-16.40	173.27	174.68	758.67	ACCEPTABLE
259	-16.51	177.28	178.69	756.60	ACCEPTABLE
260	-16.33	173.27	174.68	773.52	ACCEPTABLE
261	-0.25	1.28	6.21	4.39	ACCEPTABLE
262	-0.20	1.28	6.21	4.42	ACCEPTABLE
263	-0.26	1.41	6.29	4.39	ACCEPTABLE
264	-0.21	1.34	6.23	4.39	ACCEPTABLE
265	-0.25	1.34	6.27	4.41	ACCEPTABLE
266	-0.20	1.22	6.19	4.43	ACCEPTABLE
267	-0.25	1.34	6.27	4.41	ACCEPTABLE
268	-0.20	1.28	6.21	4.42	ACCEPTABLE
269	-0.25	1.28	6.25	4.43	ACCEPTABLE
270	-0.25	1.22	6.15	4.41	ACCEPTABLE
271	-0.30	1.34	6.23	4.38	ACCEPTABLE
272	-0.25	1.34	6.23	4.37	ACCEPTABLE
273	-0.20	1.34	6.23	4.40	ACCEPTABLE
274	-0.26	1.47	6.31	4.37	ACCEPTABLE
275	-0.21	1.47	6.31	4.40	ACCEPTABLE
276	-0.27	1.60	6.40	4.39	ACCEPTABLE
277	-0.22	1.54	6.33	4.38	ACCEPTABLE
278	-0.26	1.53	6.37	4.40	ACCEPTABLE
279	-0.21	1.41	6.29	4.42	ACCEPTABLE
280	-0.26	1.53	6.37	4.40	ACCEPTABLE
281	-0.21	1.47	6.31	4.40	ACCEPTABLE
282	-0.26	1.47	6.35	4.42	ACCEPTABLE
283	-0.26	1.41	6.25	4.35	ACCEPTABLE
284	-0.21	1.41	6.25	4.37	ACCEPTABLE
285	-0.27	1.54	6.33	4.35	ACCEPTABLE
286	-0.22	1.48	6.27	4.35	ACCEPTABLE
287	-0.26	1.47	6.31	4.37	ACCEPTABLE
288	-0.21	1.35	6.23	4.39	ACCEPTABLE
289	-0.26	1.47	6.31	4.37	ACCEPTABLE
290	-0.21	1.41	6.25	4.37	ACCEPTABLE
291	-0.26	1.41	6.29	4.39	ACCEPTABLE
292	-0.26	1.35	6.19	4.36	ACCEPTABLE
293	-0.31	1.47	6.27	4.34	ACCEPTABLE
294	-0.26	1.47	6.27	4.33	ACCEPTABLE
295	-0.21	1.47	6.27	4.36	ACCEPTABLE
296	-0.27	1.60	6.36	4.35	ACCEPTABLE
297	-0.22	1.54	6.29	4.33	ACCEPTABLE
298	-0.26	1.54	6.33	4.35	ACCEPTABLE
299	-0.21	1.41	6.25	4.37	ACCEPTABLE
300	-0.26	1.53	6.33	4.36	ACCEPTABLE
301	-0.21	1.47	6.27	4.36	ACCEPTABLE
302	-0.26	1.47	6.31	4.37	ACCEPTABLE
303	-0.26	1.41	6.21	4.33	ACCEPTABLE
304	-0.21	1.41	6.21	4.33	ACCEPTABLE
305	-0.27	1.54	6.30	4.32	ACCEPTABLE
306	-0.22	1.54	6.30	4.34	ACCEPTABLE
307	-0.28	1.67	6.39	4.33	ACCEPTABLE
308	-0.23	1.61	6.32	4.32	ACCEPTABLE
309	-0.27	1.61	6.36	4.34	ACCEPTABLE
310	-0.22	1.47	6.28	4.36	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
311	-0.27	1.60	6.36	4.35	ACCEPTABLE
312	-0.22	1.54	6.30	4.34	ACCEPTABLE
313	-0.27	1.54	6.34	4.36	ACCEPTABLE
314	-0.27	1.48	6.24	4.31	ACCEPTABLE
315	-0.22	1.48	6.24	4.32	ACCEPTABLE
316	-0.28	1.61	6.33	4.30	ACCEPTABLE
317	-0.23	1.61	6.33	4.33	ACCEPTABLE
318	-0.29	1.74	6.42	4.32	ACCEPTABLE
319	-0.24	1.68	6.35	4.30	ACCEPTABLE
320	-0.28	1.68	6.40	4.33	ACCEPTABLE
321	-0.23	1.54	6.31	4.35	ACCEPTABLE
322	-0.28	1.67	6.39	4.33	ACCEPTABLE
323	-0.23	1.61	6.33	4.33	ACCEPTABLE
324	-0.28	1.61	6.37	4.34	ACCEPTABLE
325	-0.28	1.55	6.27	4.28	ACCEPTABLE
326	-0.23	1.55	6.27	4.30	ACCEPTABLE
327	-0.29	1.68	6.36	4.29	ACCEPTABLE
328	-0.24	1.62	6.29	4.28	ACCEPTABLE
329	-0.20	1.62	6.29	4.30	ACCEPTABLE
330	-0.25	1.76	6.38	4.28	ACCEPTABLE
331	-0.20	1.69	6.31	4.28	ACCEPTABLE
332	-0.24	1.69	6.36	4.31	ACCEPTABLE
333	-0.19	1.55	6.27	4.32	ACCEPTABLE
334	-0.24	1.68	6.35	4.30	ACCEPTABLE
335	-0.19	1.62	6.29	4.30	ACCEPTABLE
336	-0.24	1.62	6.33	4.32	ACCEPTABLE
337	-0.24	1.56	6.23	4.27	ACCEPTABLE
338	-0.20	1.56	6.23	4.27	ACCEPTABLE
339	-0.25	1.69	6.32	4.26	ACCEPTABLE
340	-0.21	1.69	6.32	4.28	ACCEPTABLE
341	-0.26	1.83	6.41	4.27	ACCEPTABLE
342	-0.21	1.76	6.35	4.28	ACCEPTABLE
343	-0.25	1.76	6.39	4.29	ACCEPTABLE
344	-0.20	1.62	6.30	4.31	ACCEPTABLE
345	-0.25	1.75	6.38	4.29	ACCEPTABLE
346	-0.20	1.69	6.32	4.29	ACCEPTABLE
347	-0.25	1.69	6.36	4.30	ACCEPTABLE
348	-0.25	1.63	6.26	4.25	ACCEPTABLE
349	-0.21	1.63	6.26	4.26	ACCEPTABLE
350	-0.26	1.77	6.35	4.24	ACCEPTABLE
351	-0.22	1.77	6.35	4.26	ACCEPTABLE
352	-0.27	1.91	6.44	4.25	ACCEPTABLE
353	-0.22	1.84	6.38	4.26	ACCEPTABLE
354	-0.26	1.84	6.42	4.28	ACCEPTABLE
355	-0.21	1.70	6.32	4.28	ACCEPTABLE
356	-0.26	1.83	6.42	4.28	ACCEPTABLE
357	-0.21	1.77	6.35	4.27	ACCEPTABLE
358	-0.26	1.76	6.39	4.29	ACCEPTABLE
359	-0.26	1.71	6.28	4.24	ACCEPTABLE
360	-0.22	1.71	6.28	4.22	ACCEPTABLE
361	-0.18	1.71	6.28	4.25	ACCEPTABLE
362	-0.23	1.85	6.37	4.23	ACCEPTABLE
363	-0.18	1.78	6.31	4.24	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
364	-0.22	1.78	6.35	4.26	ACCEPTABLE
365	-0.17	1.64	6.26	4.27	ACCEPTABLE
366	-0.22	1.77	6.35	4.26	ACCEPTABLE
367	-0.17	1.71	6.28	4.25	ACCEPTABLE
368	-0.22	1.71	6.32	4.27	ACCEPTABLE
369	-0.22	1.65	6.22	4.24	ACCEPTABLE
370	-0.27	1.78	6.31	4.22	ACCEPTABLE
371	-0.23	1.78	6.31	4.21	ACCEPTABLE
372	-0.19	1.78	6.31	4.23	ACCEPTABLE
373	-0.24	1.92	6.40	4.22	ACCEPTABLE
374	-0.19	1.85	6.34	4.22	ACCEPTABLE
375	-0.23	1.85	6.38	4.24	ACCEPTABLE
376	-0.18	1.71	6.28	4.25	ACCEPTABLE
377	-0.23	1.84	6.38	4.25	ACCEPTABLE
378	-0.18	1.78	6.31	4.24	ACCEPTABLE
379	-0.23	1.77	6.35	4.26	ACCEPTABLE
380	-0.23	1.72	6.24	4.24	ACCEPTABLE
381	-0.28	1.85	6.34	4.21	ACCEPTABLE
382	-0.24	1.85	6.34	4.20	ACCEPTABLE
383	-0.20	1.85	6.34	4.22	ACCEPTABLE
384	-0.25	1.99	6.44	4.22	ACCEPTABLE
385	-0.20	1.92	6.37	4.21	ACCEPTABLE
386	-0.24	1.92	6.41	4.23	ACCEPTABLE
387	-0.19	1.78	6.31	4.23	ACCEPTABLE
388	-0.24	1.91	6.41	4.24	ACCEPTABLE
389	-0.19	1.85	6.34	4.22	ACCEPTABLE
390	-0.24	1.84	6.38	4.24	ACCEPTABLE
391	-0.24	1.79	6.27	4.22	ACCEPTABLE
392	-0.29	1.92	6.37	4.19	ACCEPTABLE
393	-0.25	1.92	6.37	4.18	ACCEPTABLE
394	-0.21	1.92	6.37	4.20	ACCEPTABLE
395	-0.26	2.06	6.47	4.20	ACCEPTABLE
396	-0.21	1.99	6.40	4.20	ACCEPTABLE
397	-0.25	1.99	6.44	4.22	ACCEPTABLE
398	-0.20	1.85	6.34	4.22	ACCEPTABLE
399	-0.25	1.99	6.44	4.22	ACCEPTABLE
400	-0.20	1.92	6.37	4.21	ACCEPTABLE
401	-0.25	1.91	6.41	4.23	ACCEPTABLE
402	-0.25	1.85	6.30	4.21	ACCEPTABLE
403	-0.30	1.99	6.40	4.18	ACCEPTABLE
404	-0.26	1.99	6.40	4.17	ACCEPTABLE
405	-0.22	1.99	6.40	4.19	ACCEPTABLE
406	-0.27	2.14	6.50	4.18	ACCEPTABLE
407	-0.22	2.07	6.43	4.18	ACCEPTABLE
408	-0.26	2.06	6.47	4.20	ACCEPTABLE
409	-0.21	1.92	6.37	4.20	ACCEPTABLE
410	-0.26	2.06	6.47	4.20	ACCEPTABLE
411	-0.21	1.99	6.40	4.20	ACCEPTABLE
412	-0.26	1.98	6.44	4.22	ACCEPTABLE
413	-0.26	1.92	6.33	4.19	ACCEPTABLE
414	-0.31	2.06	6.43	4.17	ACCEPTABLE
415	-0.26	2.00	6.36	4.17	ACCEPTABLE
416	-0.22	2.00	6.36	4.14	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
417	-0.18	2.00	6.36	4.17	ACCEPTABLE
418	-0.23	2.15	6.46	4.16	ACCEPTABLE
419	-0.18	2.08	6.39	4.15	ACCEPTABLE
420	-0.22	2.07	6.43	4.18	ACCEPTABLE
421	-0.17	1.93	6.33	4.18	ACCEPTABLE
422	-0.22	2.07	6.43	4.18	ACCEPTABLE
423	-0.17	2.00	6.36	4.17	ACCEPTABLE
424	-0.22	1.99	6.40	4.19	ACCEPTABLE
425	-0.22	1.93	6.29	4.18	ACCEPTABLE
426	-0.27	2.07	6.39	4.16	ACCEPTABLE
427	-0.22	2.01	6.32	4.15	ACCEPTABLE
428	-0.27	2.00	6.36	4.18	ACCEPTABLE
429	-0.23	1.89	6.30	4.18	ACCEPTABLE
430	-0.21	1.86	6.26	4.19	ACCEPTABLE
431	-0.26	1.99	6.36	4.17	ACCEPTABLE
432	-0.22	1.93	6.29	4.18	ACCEPTABLE
433	-0.26	1.92	6.33	4.19	ACCEPTABLE
434	-0.27	2.00	6.36	4.18	ACCEPTABLE
435	-0.22	1.93	6.29	4.18	ACCEPTABLE
436	-0.22	2.07	6.43	4.18	ACCEPTABLE
437	-0.17	2.00	6.36	4.17	ACCEPTABLE
438	-16.42	174.00	175.41	712.92	ACCEPTABLE
439	-16.50	176.67	178.08	757.49	ACCEPTABLE
440	-16.37	174.00	175.41	753.73	ACCEPTABLE
441	-0.22	2.00	6.36	4.14	ACCEPTABLE
442	-0.19	2.00	6.36	4.16	ACCEPTABLE
443	-0.23	2.10	6.43	4.16	ACCEPTABLE
444	-0.19	2.05	6.38	4.15	ACCEPTABLE
445	-0.22	2.05	6.41	4.17	ACCEPTABLE
446	-0.19	1.95	6.34	4.17	ACCEPTABLE
447	-0.22	2.04	6.41	4.17	ACCEPTABLE
448	-0.19	2.00	6.36	4.16	ACCEPTABLE
449	-0.22	2.00	6.39	4.17	ACCEPTABLE
450	-0.22	1.96	6.31	4.16	ACCEPTABLE
451	-0.25	2.05	6.38	4.14	ACCEPTABLE
452	-0.22	2.05	6.38	4.14	ACCEPTABLE
453	-0.19	2.05	6.38	4.15	ACCEPTABLE
454	-0.23	2.15	6.45	4.15	ACCEPTABLE
455	-0.19	2.10	6.40	4.15	ACCEPTABLE
456	-0.22	2.10	6.43	4.16	ACCEPTABLE
457	-0.19	2.00	6.36	4.16	ACCEPTABLE
458	-0.22	2.09	6.43	4.17	ACCEPTABLE
459	-0.19	2.05	6.38	4.15	ACCEPTABLE
460	-0.22	2.05	6.41	4.17	ACCEPTABLE
461	-0.22	2.01	6.33	4.14	ACCEPTABLE
462	-0.25	2.10	6.40	4.12	ACCEPTABLE
463	-0.22	2.10	6.40	4.13	ACCEPTABLE
464	-0.26	2.20	6.47	4.13	ACCEPTABLE
465	-0.22	2.15	6.42	4.12	ACCEPTABLE
466	-0.25	2.15	6.45	4.14	ACCEPTABLE
467	-0.22	2.05	6.38	4.14	ACCEPTABLE
468	-0.25	2.14	6.45	4.14	ACCEPTABLE
469	-0.22	2.10	6.40	4.13	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
470	-0.25	2.10	6.43	4.14	ACCEPTABLE
471	-0.25	2.06	6.35	4.17	ACCEPTABLE
472	-0.28	2.15	6.42	4.15	ACCEPTABLE
473	-0.25	2.10	6.37	4.16	ACCEPTABLE
474	-0.28	2.10	6.40	4.17	ACCEPTABLE
475	-0.26	2.02	6.36	4.17	ACCEPTABLE
476	-0.24	2.00	6.33	4.17	ACCEPTABLE
477	-0.28	2.10	6.40	4.17	ACCEPTABLE
478	-0.25	2.05	6.35	4.17	ACCEPTABLE
479	-0.28	2.05	6.38	4.18	ACCEPTABLE
480	-0.28	2.10	6.40	4.17	ACCEPTABLE
481	-0.25	2.05	6.35	4.17	ACCEPTABLE
482	-0.25	2.15	6.45	4.14	ACCEPTABLE
483	-0.22	2.10	6.40	4.13	ACCEPTABLE
484	-16.03	167.97	169.38	741.27	ACCEPTABLE
485	-16.08	169.72	171.13	740.58	ACCEPTABLE
486	-16.00	167.97	169.38	713.75	ACCEPTABLE
487	-0.25	2.10	6.40	4.12	ACCEPTABLE
488	-0.23	2.10	6.40	4.12	ACCEPTABLE
489	-0.26	2.17	6.45	4.12	ACCEPTABLE
490	-0.24	2.17	6.45	4.13	ACCEPTABLE
491	-0.27	2.24	6.50	4.13	ACCEPTABLE
492	-0.24	2.20	6.46	4.13	ACCEPTABLE
493	-0.26	2.20	6.48	4.14	ACCEPTABLE
494	-0.24	2.14	6.44	4.14	ACCEPTABLE
495	-0.26	2.20	6.48	4.14	ACCEPTABLE
496	-0.24	2.17	6.45	4.13	ACCEPTABLE
497	-0.26	2.17	6.47	4.14	ACCEPTABLE
498	-0.26	2.14	6.42	4.12	ACCEPTABLE
499	-0.24	2.14	6.42	4.12	ACCEPTABLE
500	-0.22	2.14	6.42	4.13	ACCEPTABLE
501	-0.25	2.21	6.47	4.13	ACCEPTABLE
502	-0.22	2.17	6.43	4.12	ACCEPTABLE
503	-0.24	2.17	6.45	4.13	ACCEPTABLE
504	-0.22	2.11	6.41	4.13	ACCEPTABLE
505	-0.24	2.17	6.45	4.13	ACCEPTABLE
506	-0.22	2.14	6.42	4.13	ACCEPTABLE
507	-0.24	2.14	6.44	4.14	ACCEPTABLE
508	-0.24	2.11	6.39	4.12	ACCEPTABLE
509	-0.26	2.17	6.43	4.11	ACCEPTABLE
510	-0.24	2.17	6.43	4.11	ACCEPTABLE
511	-0.22	2.17	6.43	4.12	ACCEPTABLE
512	-0.25	2.24	6.48	4.12	ACCEPTABLE
513	-0.22	2.21	6.45	4.12	ACCEPTABLE
514	-0.24	2.20	6.46	4.13	ACCEPTABLE
515	-0.22	2.14	6.42	4.13	ACCEPTABLE
516	-0.24	2.20	6.46	4.13	ACCEPTABLE
517	-0.22	2.17	6.43	4.12	ACCEPTABLE
518	-0.24	2.17	6.45	4.13	ACCEPTABLE
519	-0.24	2.14	6.40	4.11	ACCEPTABLE
520	-0.26	2.20	6.44	4.11	ACCEPTABLE
521	-0.24	2.20	6.44	4.10	ACCEPTABLE
522	-0.22	2.20	6.44	4.12	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

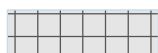
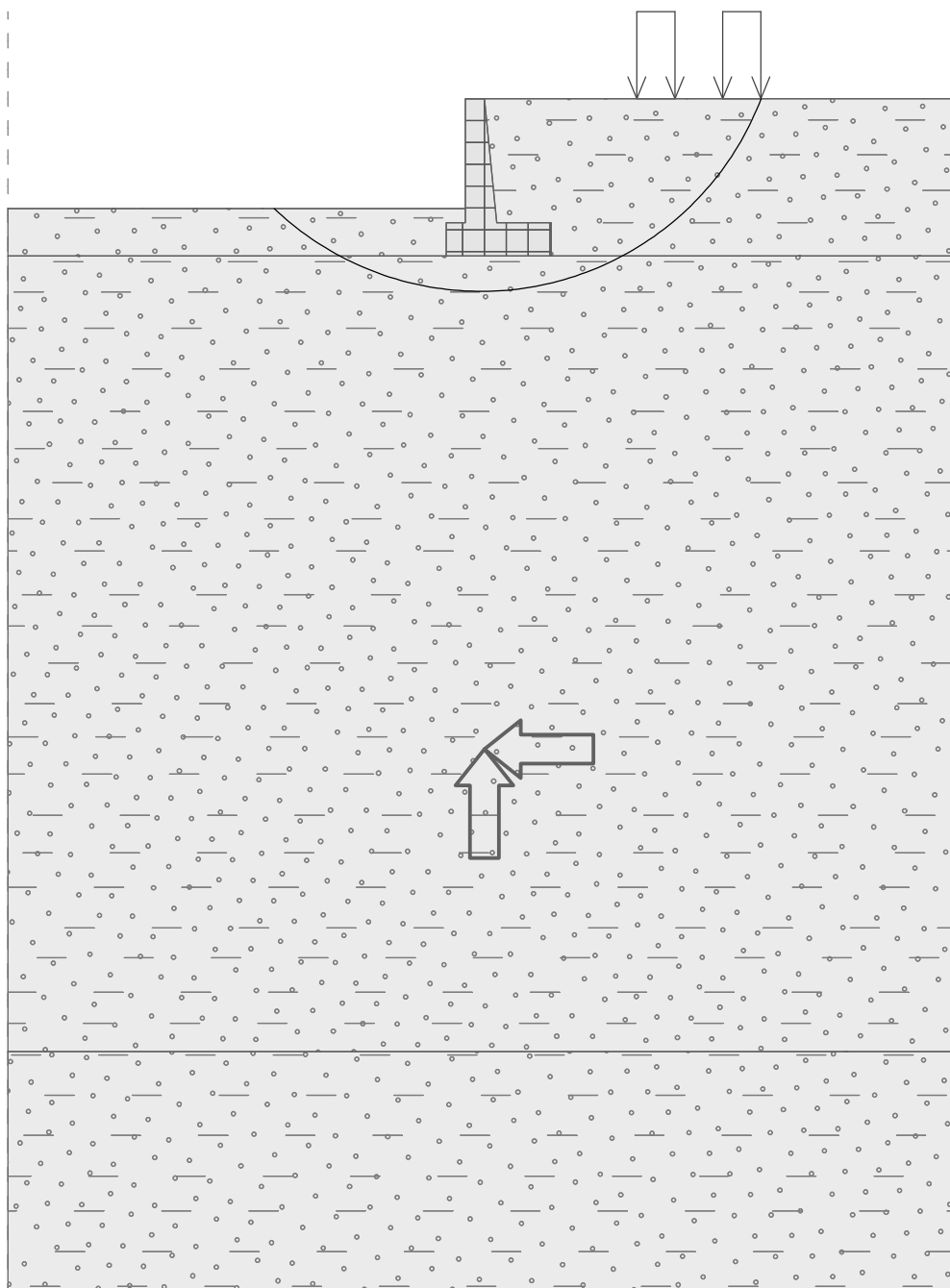
No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
523	-0.25	2.27	6.49	4.11	ACCEPTABLE
524	-0.22	2.24	6.46	4.11	ACCEPTABLE
525	-0.24	2.23	6.47	4.12	ACCEPTABLE
526	-0.22	2.17	6.43	4.12	ACCEPTABLE
527	-0.24	2.23	6.47	4.12	ACCEPTABLE
528	-0.22	2.20	6.44	4.12	ACCEPTABLE
529	-0.24	2.20	6.46	4.13	ACCEPTABLE
530	-0.24	2.17	6.41	4.11	ACCEPTABLE
531	-0.26	2.23	6.45	4.10	ACCEPTABLE
532	-0.24	2.23	6.45	4.10	ACCEPTABLE
533	-0.22	2.23	6.45	4.11	ACCEPTABLE
534	-0.25	2.30	6.50	4.11	ACCEPTABLE
535	-0.22	2.27	6.47	4.11	ACCEPTABLE
536	-0.24	2.26	6.48	4.11	ACCEPTABLE
537	-0.22	2.20	6.44	4.12	ACCEPTABLE
538	-0.24	2.26	6.48	4.11	ACCEPTABLE
539	-0.22	2.23	6.45	4.11	ACCEPTABLE
540	-0.24	2.23	6.47	4.12	ACCEPTABLE
541	-0.24	2.20	6.42	4.10	ACCEPTABLE
542	-0.26	2.26	6.46	4.10	ACCEPTABLE
543	-0.24	2.26	6.46	4.09	ACCEPTABLE
544	-0.22	2.26	6.46	4.10	ACCEPTABLE
545	-0.25	2.33	6.51	4.10	ACCEPTABLE
546	-0.22	2.30	6.48	4.10	ACCEPTABLE
547	-0.24	2.29	6.49	4.11	ACCEPTABLE
548	-0.22	2.23	6.45	4.11	ACCEPTABLE
549	-0.24	2.29	6.49	4.11	ACCEPTABLE
550	-0.22	2.26	6.46	4.10	ACCEPTABLE
551	-0.24	2.26	6.48	4.11	ACCEPTABLE
552	-0.24	2.23	6.43	4.10	ACCEPTABLE
553	-0.26	2.29	6.48	4.09	ACCEPTABLE
554	-0.24	2.29	6.48	4.10	ACCEPTABLE
555	-0.27	2.36	6.53	4.09	ACCEPTABLE
556	-0.24	2.33	6.50	4.10	ACCEPTABLE
557	-0.26	2.32	6.51	4.10	ACCEPTABLE
558	-0.24	2.26	6.46	4.09	ACCEPTABLE
559	-0.26	2.32	6.51	4.10	ACCEPTABLE
560	-0.24	2.29	6.48	4.10	ACCEPTABLE
561	-0.26	2.29	6.50	4.11	ACCEPTABLE
562	-0.26	2.26	6.45	4.11	ACCEPTABLE
563	-0.28	2.32	6.50	4.10	ACCEPTABLE
564	-0.26	2.29	6.46	4.10	ACCEPTABLE
565	-0.28	2.29	6.48	4.11	ACCEPTABLE
566	-0.27	2.24	6.45	4.12	ACCEPTABLE
567	-0.25	2.22	6.43	4.11	ACCEPTABLE
568	-0.28	2.29	6.48	4.11	ACCEPTABLE
569	-0.26	2.26	6.45	4.11	ACCEPTABLE
570	-0.28	2.25	6.46	4.13	ACCEPTABLE
571	-0.28	2.29	6.48	4.11	ACCEPTABLE
572	-0.26	2.26	6.45	4.11	ACCEPTABLE
573	-0.26	2.32	6.51	4.10	ACCEPTABLE
574	-0.24	2.29	6.48	4.10	ACCEPTABLE
575	-16.05	168.19	169.60	697.89	ACCEPTABLE

ქვედა საყრდენი კედელი h-1.2მ

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
576	-16.09	169.36	170.77	697.93	ACCEPTABLE
577	-16.03	168.19	169.60	740.63	ACCEPTABLE
578	-0.26	2.29	6.48	4.09	ACCEPTABLE
579	-0.25	2.29	6.48	4.09	ACCEPTABLE
580	-0.26	2.34	6.51	4.09	ACCEPTABLE
581	-0.25	2.31	6.49	4.09	ACCEPTABLE
582	-0.26	2.31	6.50	4.10	ACCEPTABLE
583	-0.24	2.27	6.47	4.10	ACCEPTABLE
584	-0.26	2.31	6.50	4.10	ACCEPTABLE
585	-0.25	2.29	6.48	4.09	ACCEPTABLE
586	-0.26	2.29	6.49	4.10	ACCEPTABLE
587	-0.26	2.27	6.46	4.10	ACCEPTABLE
588	-0.28	2.31	6.49	4.10	ACCEPTABLE
589	-0.26	2.29	6.47	4.09	ACCEPTABLE
590	-0.27	2.29	6.48	4.10	ACCEPTABLE
591	-0.26	2.25	6.46	4.10	ACCEPTABLE
592	-0.26	2.24	6.45	4.10	ACCEPTABLE
593	-0.27	2.29	6.48	4.10	ACCEPTABLE
594	-0.26	2.27	6.46	4.10	ACCEPTABLE
595	-0.27	2.27	6.47	4.10	ACCEPTABLE
596	-0.27	2.29	6.48	4.10	ACCEPTABLE
597	-0.26	2.27	6.46	4.10	ACCEPTABLE
598	-0.26	2.31	6.50	4.10	ACCEPTABLE
599	-0.25	2.29	6.48	4.09	ACCEPTABLE
600	-16.05	168.27	169.68	742.17	ACCEPTABLE
601	-16.07	169.05	170.46	697.11	ACCEPTABLE
602	-16.03	168.27	169.68	740.38	ACCEPTABLE
603	-0.26	2.29	6.48	4.09	ACCEPTABLE

Name : Analysis

Stage - analysis : 1 - 1



Wall material

თიხნარი ყველაფერი ღორღისა და ხვინჯის ჩანართებით
შყარი კონსისტენციის

The slip surface after optimization.

Slope stability verification (Bishop)Sum of active forces : $F_a = 329.27 \text{ kN/m}$ Sum of passive forces : $F_p = 1047.01 \text{ kN/m}$ Sliding moment : $M_a = 2071.08 \text{ kNm/m}$ Resisting moment : $M_p = 6585.68 \text{ kNm/m}$ Factor of safety = $3.18 > 1.00$ **Slope stability ACCEPTABLE**

Slope stability analysis

Input data

Project

Settings

Standard - safety factors (5)

Materials and standards

SNiP - input coefficients according to SNiP standards

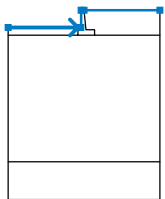
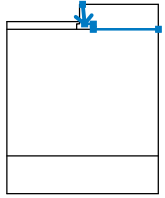
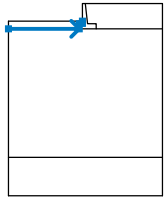
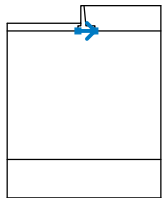
Coefficients according to SNiP			
Combination coefficient :	$\gamma_k =$	1.00	[-]
Coefficient of action conditions :	$\gamma_c =$	0.90	[-]
Coefficient of importance of structure :	$\gamma_n =$	1.10	[-]

Stability analysis

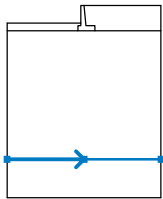
Verification methodology : Safety factors (ASD)

Safety factors			
Seismic design situation			
Safety factor :	$SF_s =$	1.00	[-]

Interface

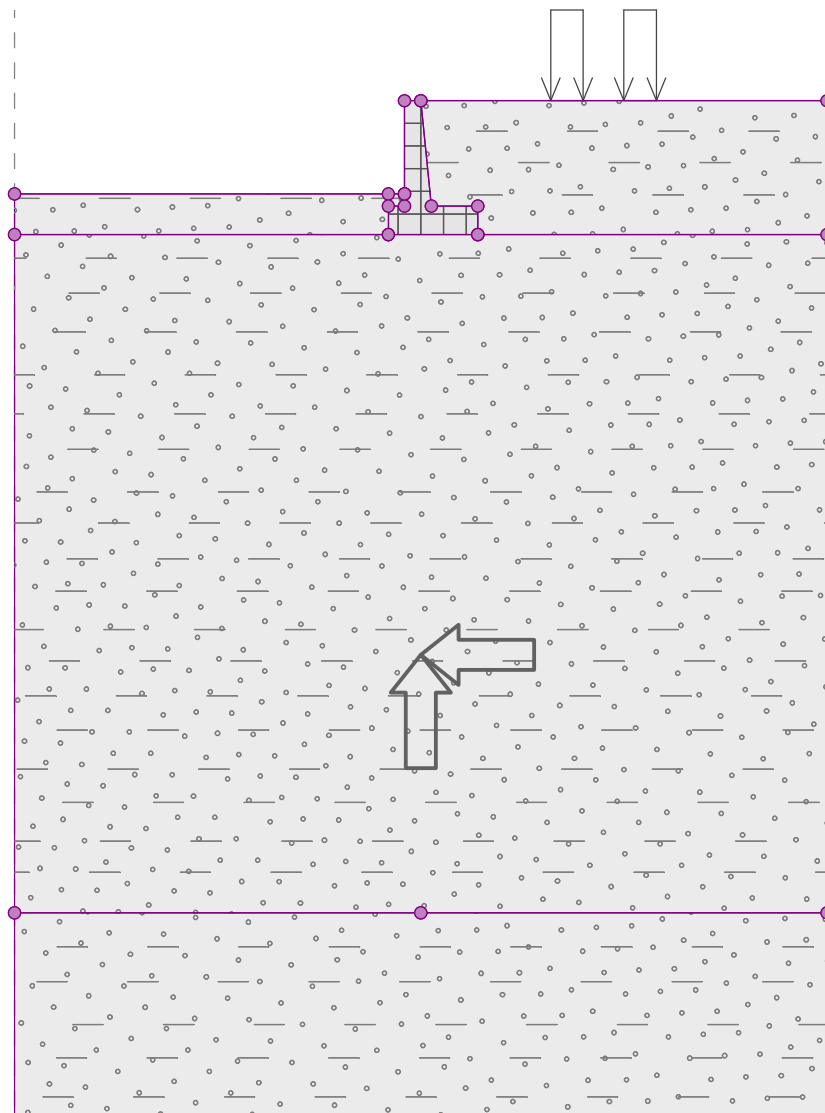
No.	Interface location	Coordinates of interface points [m]					
		x	z	x	z	x	z
1		-10.00	-2.30	-0.80	-2.30	-0.40	-2.30
		-0.40	0.00	0.00	0.00	10.00	0.00
2		0.00	0.00	0.26	-2.60	1.40	-2.60
		1.40	-3.30	10.00	-3.30		
3		-10.00	-3.30	-0.80	-3.30	-0.80	-2.60
		-0.40	-2.60	-0.40	-2.30		
4		-0.80	-3.30	1.40	-3.30		

ქვედა საყრდენი კედელი h-3.3მ

No.	Interface location	Coordinates of interface points [m]					
		x	z	x	z	x	z
5		-10.00	-20.00	0.00	-20.00	10.00	-20.00

Name : Interface

Stage : 1



Soil parameters - effective stress state

No.	Name	Pattern	Φ_{ef} [°]	C_{ef} [kPa]	γ [kN/m ³]
1	თიხნარი ყავისფერი ღორღისა და ხვინჯის ჩანართებით მყარი კონსისტენციის		20.00	61.80	19.20

ქვედა საყრდენი კედელი h-3.3მ

Soil parameters - uplift

No.	Name	Pattern	γ_{sat} [kN/m ³]	γ_s [kN/m ³]	n [-]
1	თიხნარი ყავისფერი ღორღისა და ხვინჯის ჩანართებით მყარი კონსისტენციის		19.20		

Soil parameters

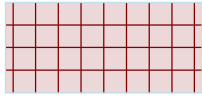
თიხნარი ყავისფერი ღორღისა და ხვინჯის ჩანართებით მყარი კონსისტენციის

Unit weight : $\gamma = 19.20 \text{ kN/m}^3$

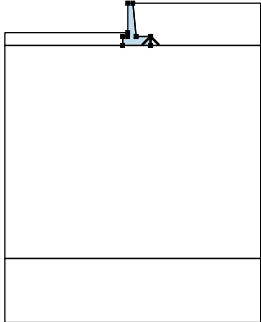
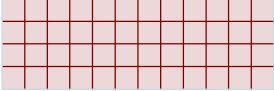
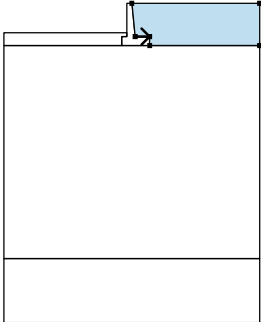
Stress-state : effective

Angle of internal friction : $\varphi_{ef} = 20.00^\circ$ Cohesion of soil : $c_{ef} = 61.80 \text{ kPa}$ Saturated unit weight : $\gamma_{sat} = 19.20 \text{ kN/m}^3$

Rigid bodies

No.	Name	Sample	γ [kN/m ³]
1	Wall material		23.56

Assigning and surfaces

No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
1		1.40	-3.30	1.40	-2.60	Wall material 
		0.26	-2.60	0.00	0.00	
		-0.40	0.00	-0.40	-2.30	
		-0.40	-2.60	-0.80	-2.60	
		-0.80	-3.30			
2		0.26	-2.60	1.40	-2.60	თიხნარი ყავისფერი ღორღისა და ხვინჯის ჩანართებით მყარი კონსისტენციის 
		1.40	-3.30	10.00	-3.30	
		10.00	0.00	0.00	0.00	

ქვედა საყრდენი კედელი h-3.3მ

No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
3		-0.80	-3.30	-0.80	-2.60	თიხნარი ყავისფერი ღორღისა და ხვინჯის ჩანართებით მყარი პონსისაბინიის
		-0.40	-2.60	-0.40	-2.30	
		-0.80	-2.30	-10.00	-2.30	
		-10.00	-3.30			
4		0.00	-20.00	10.00	-20.00	თიხნარი ყავისფერი ღორღისა და ხვინჯის ჩანართებით მყარი პონსისაბინიის
		10.00	-3.30	1.40	-3.30	
		-0.80	-3.30	-10.00	-3.30	
		-10.00	-20.00			
5		0.00	-20.00	-10.00	-20.00	თიხნარი ყავისფერი ღორღისა და ხვინჯის ჩანართებით მყარი პონსისაბინიის
		-10.00	-25.00	10.00	-25.00	
		10.00	-20.00			

Surcharge

No.	Type	Type of action	Location z [m]	Origin x [m]	Length l [m]	Width b [m]	Slope α [°]	Magnitude		
								q, q ₁ , f, F	q ₂	unit
1	strip	variable	on terrain	x = 3.20	l = 0.80		0.00	196.00		kN/m ²
2	strip	variable	on terrain	x = 5.00	l = 0.80		0.00	196.00		kN/m ²

Surcharges

No.	Name
1	HK80

Water

Water type : No water

Tensile crack

Tensile crack not inputted.

EarthquakeHorizontal seismic coefficient : $K_h = 0.08$ Vertical seismic coefficient : $K_v = 0.20$ **Settings of the stage of construction**

Design situation : seismic

Results (Stage of construction 1)

Analysis 1

Circular slip surface

Slip surface parameters					
Center :	x =	-0.07 [m]	Angles :	α_1 =	-43.67 [°]
	z =	2.25 [m]		α_2 =	69.04 [°]
Radius :	R =	6.29 [m]			
The slip surface after optimization.					

Slope stability verification (Bishop)

Sum of active forces : $F_a = 329.27$ kN/m

Sum of passive forces : $F_p = 1047.01$ kN/m

Sliding moment : $M_a = 2071.08$ kNm/m

Resisting moment : $M_p = 6585.68$ kNm/m

Factor of safety = $3.18 > 1.00$

Slope stability ACCEPTABLE

Optimization of circular slip surface (Bishop)

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
1	-0.34	1.40	6.30	3.45	ACCEPTABLE
2	-0.34	1.40	6.30	3.45	ACCEPTABLE
3	-0.99	8.54	13.70	6.49	ACCEPTABLE
4	-0.72	6.36	12.23	5.45	ACCEPTABLE
5	3.58	1.40	6.30	45.22	ACCEPTABLE
6	-0.09	1.06	9.86	6.24	ACCEPTABLE
7	-4.26	1.40	6.30	135.57	ACCEPTABLE
8	-1.09	9.37	14.31	6.60	ACCEPTABLE
9	-24.89	72.42	77.21	797.20	ACCEPTABLE
10	-42.44	292.75	297.36	197.23	ACCEPTABLE
11	-20.97	72.42	77.21	163.44	ACCEPTABLE
12	-0.34	1.40	6.30	3.45	ACCEPTABLE
13	-4.07	29.29	31.84	128.37	ACCEPTABLE
14	-0.11	13.05	15.59	61.60	ACCEPTABLE
15	-0.82	6.04	11.04	4.89	ACCEPTABLE
16	-0.64	4.76	10.23	4.85	ACCEPTABLE
17	2.27	1.40	6.30	6.60	ACCEPTABLE
18	-0.14	1.13	8.63	5.40	ACCEPTABLE
19	-3.97	6.38	9.59	174.24	ACCEPTABLE
20	-1.38	2.94	5.44	154.89	ACCEPTABLE
21	-2.95	1.40	6.30	36.10	ACCEPTABLE
22	-2.72	0.28	5.92	10.49	ACCEPTABLE
23	-0.85	6.26	11.18	4.90	ACCEPTABLE
24	2.40	0.76	6.06	7.01	ACCEPTABLE
25	-27.68	98.47	103.19	470.52	ACCEPTABLE
26	-39.43	245.36	249.98	228.01	ACCEPTABLE
27	-25.07	98.47	103.19	209.37	ACCEPTABLE
28	-0.34	1.40	6.30	3.45	ACCEPTABLE
29	-1.85	11.84	15.11	102.68	ACCEPTABLE
30	0.43	6.14	9.40	132.74	ACCEPTABLE
31	-0.69	4.43	9.35	4.38	ACCEPTABLE
32	-0.57	3.67	8.91	4.39	ACCEPTABLE
33	1.40	1.40	6.30	5.52	ACCEPTABLE
34	-0.18	1.19	7.82	4.77	ACCEPTABLE

No.	Center		Radius R [m]	FS	Verification
	x [m]	z [m]			
35	-2.69	4.39	8.05	89.91	ACCEPTABLE
36	-0.75	1.98	5.20	117.26	ACCEPTABLE
37	-2.08	1.40	6.30	4.59	ACCEPTABLE
38	-1.96	0.81	6.07	4.75	ACCEPTABLE
39	-0.69	4.43	9.35	4.38	ACCEPTABLE
40	1.44	1.22	6.23	5.59	ACCEPTABLE
41	-29.59	118.21	122.90	395.89	ACCEPTABLE
42	-37.44	216.13	220.76	243.79	ACCEPTABLE
43	-27.85	118.21	122.90	240.68	ACCEPTABLE
44	-0.34	1.40	6.30	3.45	ACCEPTABLE
45	0.91	0.94	6.12	4.19	ACCEPTABLE
46	-1.16	6.78	10.59	4.24	ACCEPTABLE
47	0.29	3.98	7.77	3.88	ACCEPTABLE
48	-0.59	3.39	8.28	4.04	ACCEPTABLE
49	-0.51	2.94	8.03	4.06	ACCEPTABLE
50	0.82	1.40	6.30	4.07	ACCEPTABLE
51	-0.22	1.24	7.29	4.32	ACCEPTABLE
52	-1.89	3.30	7.32	10.27	ACCEPTABLE
53	-0.55	1.70	5.46	4.10	ACCEPTABLE
54	-1.50	1.40	6.30	4.67	ACCEPTABLE
55	-1.31	0.47	5.97	4.93	ACCEPTABLE
56	-1.44	1.08	6.17	4.74	ACCEPTABLE
57	-0.58	3.33	8.25	4.05	ACCEPTABLE
58	0.83	1.38	6.29	4.08	ACCEPTABLE
59	-30.88	132.42	137.10	336.56	ACCEPTABLE
60	-36.11	197.70	202.34	242.14	ACCEPTABLE
61	-29.71	132.42	137.10	244.75	ACCEPTABLE
62	-0.34	1.40	6.30	3.45	ACCEPTABLE
63	0.46	1.29	6.25	3.84	ACCEPTABLE
64	-0.84	4.52	8.68	3.81	ACCEPTABLE
65	0.12	2.94	7.10	3.65	ACCEPTABLE
66	-0.51	2.71	7.59	3.82	ACCEPTABLE
67	0.67	0.24	5.91	4.18	ACCEPTABLE
68	-0.46	2.43	7.45	3.84	ACCEPTABLE
69	0.43	1.40	6.30	3.81	ACCEPTABLE
70	-0.26	1.29	6.95	4.01	ACCEPTABLE
71	-0.16	0.30	5.20	4.75	ACCEPTABLE
72	-1.37	2.64	6.92	4.62	ACCEPTABLE
73	-0.46	1.57	5.71	4.38	ACCEPTABLE
74	-1.11	1.40	6.30	4.72	ACCEPTABLE
75	-1.01	0.90	6.11	4.84	ACCEPTABLE
76	-0.13	0.17	5.16	4.82	ACCEPTABLE
77	-0.86	0.14	5.89	5.17	ACCEPTABLE
78	-1.08	1.22	6.23	4.76	ACCEPTABLE
79	-0.17	0.31	5.20	4.77	ACCEPTABLE
80	-0.50	2.65	7.56	3.82	ACCEPTABLE
81	0.43	1.43	6.31	3.80	ACCEPTABLE
82	-31.74	142.36	147.04	301.93	ACCEPTABLE
83	-35.23	185.89	190.53	242.80	ACCEPTABLE
84	-30.97	142.36	147.04	243.91	ACCEPTABLE
85	-0.34	1.40	6.30	3.45	ACCEPTABLE
86	0.18	1.40	6.30	3.66	ACCEPTABLE
87	-0.65	3.31	7.72	3.63	ACCEPTABLE