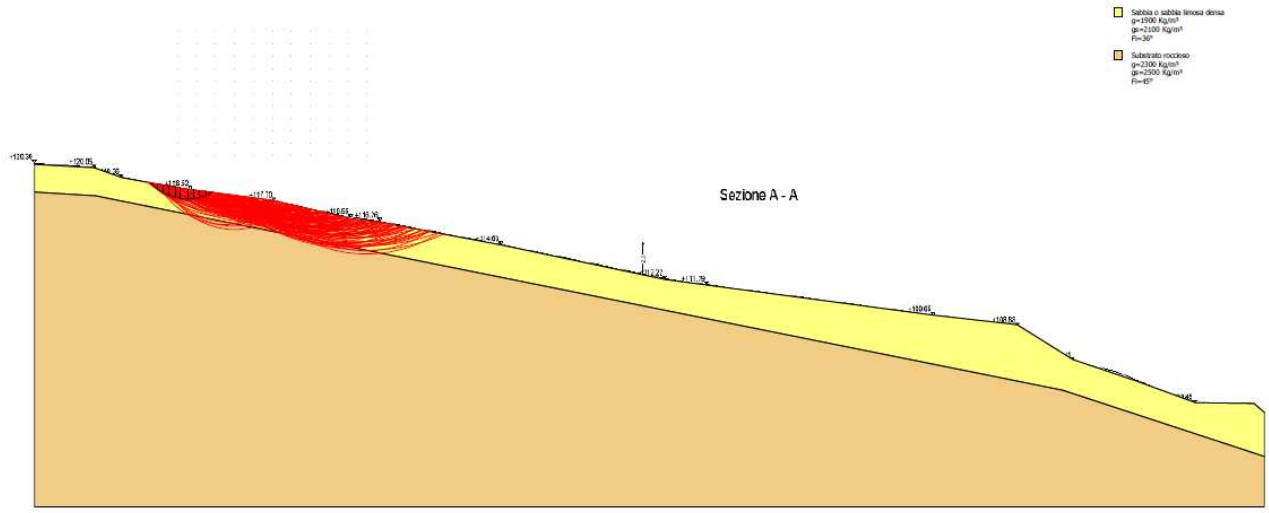
STATO ATTUALE

VERIFICA DI STABILITA' – V1 – (Condizioni sismiche) – Pendio parte alta



Analisi di stabilità dei pendii con MORGENSTERN-PRICE

==========

Numero di strati	2.0
Numero dei conci	10.0
Fattore di sicurezza [R2]	1.3

Superficie di forma circolare

==========

Maglia dei Centri

==========

Ascissa vertice sinistro inferiore xi	2.52 m
Ordinata vertice sinistro inferiore yi	39.9 m
Ascissa vertice destro superiore xs	17.48 m
Ordinata vertice destro superiore ys	49.79 m
Passo di ricerca	10.0
Numero di celle lungo x	10.0
Numero di celle lungo y	10.0

==========

Coefficienti sismici [N.T.C.]

==========

Dati generali

Descrizione:	
Latitudine:	43.85
Longitudine:	7.58
Tipo opera:	2 - Opere ordinarie
Classe d'uso:	Classe I
Vita nominale:	50.0 [anni]
Vita di riferimento:	35.0 [anni]

Parametri sismici su sito di riferimento

Categoria sottosuolo:	A
Categoria topografica:	T2

S.L. Stato limite	TR Tempo ritorno [anni]	ag [m/s²]	F0 [-]	TC* [sec]
S.L.O.	30.0	0.26	2.55	0.19
S.L.D.	35.0	0.3	2.57	0.2
S.L.V.	332.0	1.17	2.44	0.28
S.L.C.	682.0	1.6	2.47	0.3

Coefficienti sismici orizzontali e verticali

Opera: Opere di sostegno

S.L. Stato limite	amax [m/s²]	beta [-]	kh [-]	kv [sec]
S.L.O.	0.312	0.2	0.0064	0.0032
S.L.D.	0.36	0.2	0.0073	0.0037
S.L.V.	1.404	0.29	0.0415	0.0208
S.L.C.	1.92	0.29	0.0568	0.0284

Coefficiente azione sismica orizzontale 0.0064
Coefficiente azione sismica verticale 0.0032

Vertici profilo

N	X m	y m
1	-8.85	39.2
2	-4.14	38.94
3	-1.92	38.15
4	2.64	37.32
5	10.07	36.34
6	16.25	34.87
7	18.59	34.6
8	28.01	32.83
9	41.16	30.06
10	62.46	27.22
11	69.07	26.47
12	73.49	23.7
13	78.56	21.99
14	83.22	20.28
15	87.87	20.21
16	88.68	19.5

Vertici strato 1

N	X m	y m
1	-8.85	37.0
2	-4.0	36.7
3	72.69	21.26
4	88.68	16.0

Stratigrafia

c: coesione; Fi: Angolo di attrito; G: Peso Specifico; Gs: Peso Specifico Saturo; K: Modulo di Winkler

Strato	c (kN/m²)	Fi (°)	G (Kg/m³)	Gs (Kg/m³)	K (Kg/cm³)	Litologia	
1	0	36	1900	2100	0.00		Sabbia e ghiaie denso
2	0	45	2300	2500	0.00		Substrato roccioso

Risultati analisi pendio

==========

Fs minimo individuato 20.0
Ascissa centro superficie 3.26 m
Ordinata centro superficie 40.39 m
Raggio superficie 3.93 m

==========

Numero di superfici esaminate....(177)

==========

N°	Xo	Yo	Ro	Fs
1	3.3	40.4	3.9	20.00

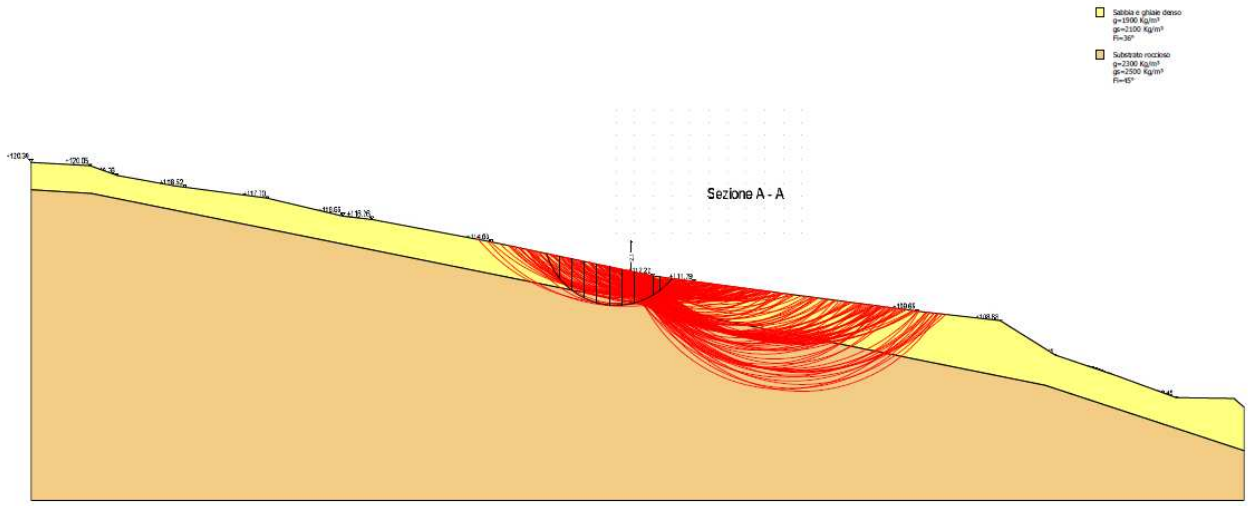
2	4.0	39.9	3.7	20.00
3	4.8	40.4	4.3	20.00
4	5.5	39.9	4.1	20.00
5	6.3	40.4	6.0	20.00
6	7.0	39.9	5.9	20.00
7	7.8	40.4	5.0	20.00
8	8.5	39.9	4.8	20.00
9	9.3	40.4	5.4	20.00
10	10.0	39.9	5.2	20.00
11	10.7	40.4	5.8	20.00
12	11.5	39.9	5.5	20.00
13	12.2	40.4	6.1	20.00
14	13.0	39.9	5.9	20.00
15	13.7	40.4	6.5	20.00
16	14.5	39.9	6.3	20.00
17	15.2	40.4	6.9	20.00
18	16.0	39.9	6.4	20.00
19	16.7	40.4	6.7	20.00
20	17.5	39.9	6.5	20.00
21	3.3	41.4	4.7	20.00
22	4.0	40.9	4.5	20.00
23	4.8	41.4	5.1	20.00
24	5.5	40.9	4.9	20.00
25	6.3	41.4	5.5	20.00
26	7.0	40.9	6.6	20.00
27	7.8	41.4	5.8	20.00
28	8.5	40.9	5.6	20.00
29	9.3	41.4	6.2	20.00
30	10.0	40.9	6.0	20.00
31	10.7	41.4	6.6	20.00
32	11.5	40.9	6.3	20.00
33	12.2	41.4	6.5	20.00
34	13.0	40.9	6.7	20.00
35	13.7	41.4	6.4	20.00
36	14.5	40.9	6.8	20.00
37	15.2	41.4	8.6	20.00
38	16.0	40.9	6.6	20.00
39	16.7	41.4	8.5	20.00
40	17.5	40.9	8.6	20.00
41	3.3	42.4	5.6	20.00
42	4.0	41.9	5.3	20.00
43	4.8	42.4	5.9	20.00
44	5.5	41.9	5.7	20.00
45	6.3	42.4	7.3	20.00
46	7.0	41.9	7.3	20.00
47	7.8	42.4	7.4	20.00
48	8.5	41.9	6.4	20.00
49	9.3	42.4	7.5	20.00
50	10.0	41.9	6.3	20.00
51	10.7	42.4	7.6	20.00
52	11.5	41.9	6.2	20.00
53	12.2	42.4	7.7	20.00
54	13.0	41.9	8.1	20.00
55	13.7	42.4	7.8	20.00
56	14.5	41.9	8.2	20.00
57	15.2	42.4	8.0	20.00
58	16.0	41.9	8.3	20.00
59	16.7	42.4	8.1	20.00
60	17.5	41.9	8.2	20.00
61	4.8	43.4	6.6	20.00
62	5.5	42.9	7.0	20.00
63	6.3	43.4	8.0	20.00
64	7.0	42.9	7.1	20.00
65	7.8	43.4	8.3	20.00
66	8.5	42.9	7.2	20.00
67	9.3	43.4	8.6	20.00
68	10.0	42.9	7.3	20.00
69	10.7	43.4	8.9	20.00
70	11.5	42.9	7.4	20.00
71	12.2	43.4	9.2	20.00
72	13.0	42.9	7.5	20.00
73	13.7	43.4	9.5	20.00
74	14.5	42.9	9.9	20.00
75	15.2	43.4	9.8	20.00
76	16.0	42.9	10.2	20.00
77	16.7	43.4	10.6	20.00
78	17.5	42.9	10.8	20.00
79	5.5	43.9	7.6	20.00

80	6.3	44.3	9.0	20.00
81	7.0	43.9	7.9	20.00
82	7.8	44.3	9.4	20.00
83	8.5	43.9	8.2	20.00
84	9.3	44.3	8.1	20.00
85	10.0	43.9	8.5	20.00
86	10.7	44.3	8.4	20.00
87	11.5	43.9	8.8	20.00
88	12.2	44.3	8.7	20.00
89	13.0	43.9	9.1	20.00
90	13.7	44.3	9.5	20.00
91	14.5	43.9	9.6	20.00
92	15.2	44.3	10.4	20.00
93	16.0	43.9	10.5	20.00
94	16.7	44.3	10.6	20.00
95	17.5	43.9	11.0	20.00
96	5.5	44.8	8.6	20.00
97	7.0	44.8	9.0	20.00
98	8.5	44.8	9.5	20.00
99	9.3	45.3	9.6	20.00
100	10.0	44.8	10.0	20.00
101	10.7	45.3	10.5	20.00
102	11.5	44.8	10.7	20.00
103	12.2	45.3	11.4	20.00
104	13.0	44.8	9.4	20.00
105	13.7	45.3	11.9	20.00
106	14.5	44.8	10.0	20.00
107	15.2	45.3	12.5	20.00
108	16.0	44.8	10.3	20.00
109	16.7	45.3	10.9	20.00
110	17.5	44.8	11.0	20.00
111	4.8	46.3	9.4	20.00
112	6.3	46.3	10.1	20.00
113	7.0	45.8	10.4	20.00
114	7.8	46.3	11.0	20.00
115	8.5	45.8	11.2	20.00
116	9.3	46.3	10.2	20.00
117	10.0	45.8	10.3	20.00
118	10.7	46.3	10.7	20.00
119	11.5	45.8	11.1	20.00
120	12.2	46.3	11.2	20.00
121	13.0	45.8	11.5	20.00
122	13.7	46.3	12.1	20.00
123	14.5	45.8	12.3	20.00
124	15.2	46.3	13.1	20.00
125	16.0	45.8	13.2	20.00
126	16.7	46.3	11.5	20.00
127	17.5	45.8	11.6	20.00
128	6.3	47.3	10.6	20.00
129	7.0	46.8	10.8	20.00
130	7.8	47.3	11.4	20.00
131	8.5	46.8	11.7	20.00
132	9.3	47.3	12.0	20.00
133	10.0	46.8	12.3	20.00
134	10.7	47.3	12.9	20.00
135	11.5	46.8	10.9	20.00
136	12.2	47.3	11.7	20.00
137	13.0	46.8	11.9	20.00
138	13.7	47.3	12.7	20.00
139	14.5	46.8	12.9	20.00
140	15.2	47.3	13.7	20.00
141	16.0	46.8	13.8	20.00
142	16.7	47.3	14.6	20.00
143	17.5	46.8	12.3	20.00
144	8.5	47.8	11.6	20.00
145	9.3	48.3	12.5	20.00
146	10.0	47.8	12.7	20.00
147	10.7	48.3	13.5	20.00
148	11.5	47.8	13.7	20.00
149	12.2	48.3	14.5	20.00
150	13.0	47.8	12.5	20.00
151	13.7	48.3	13.3	20.00
152	14.5	47.8	13.5	20.00
153	15.2	48.3	14.3	20.00
154	16.0	47.8	14.5	20.00
155	16.7	48.3	15.3	20.00
156	17.5	47.8	15.4	20.00
157	5.5	48.8	12.1	20.00

158	6.3	49.3	12.9	20.00
159	9.3	49.3	13.1	20.00
160	10.0	48.8	13.3	20.00
161	10.7	49.3	14.1	20.00
162	11.5	48.8	14.3	20.00
163	12.2	49.3	15.1	20.00
164	13.0	48.8	13.2	20.00
165	13.7	49.3	14.0	20.00
166	14.5	48.8	14.1	20.00
167	15.2	49.3	14.9	20.00
168	16.0	48.8	15.1	20.00
169	16.7	49.3	15.9	20.00
170	17.5	48.8	16.1	20.00
171	7.0	49.8	13.8	20.00
172	10.0	49.8	13.9	20.00
173	11.5	49.8	14.9	20.00
174	13.0	49.8	16.0	20.00
175	14.5	49.8	14.8	20.00
176	16.0	49.8	15.7	20.00
177	17.5	49.8	16.7	20.00

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VERIFICA DI STABILITA' – V2 – (Condizioni sismiche) – Pendio parte mediana



Analisi di stabilità dei pendii con MORGENSTERN-PRICE

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Numero di strati	2.0
Numero dei conci	10.0
Fattore di sicurezza [R2]	1.3

Superficie di forma circolare

==========

Maglia dei Centri

==========

Ascissa vertice sinistro inferiore xi	38.17 m
Ordinata vertice sinistro inferiore yi	33.52 m
Ascissa vertice destro superiore xs	53.13 m
Ordinata vertice destro superiore ys	43.41 m
Passo di ricerca	10.0
Numero di celle lungo x	10.0
Numero di celle lungo y	10.0

==========

Coefficienti sismici [N.T.C.]

==========

Dati generali

Descrizione:	
Latitudine:	43.85
Longitudine:	7.58
Tipo opera:	2 - Opere ordinarie
Classe d'uso:	Classe I
Vita nominale:	50.0 [anni]
Vita di riferimento:	35.0 [anni]

Parametri sismici su sito di riferimento

Categoria sottosuolo:	A
Categoria topografica:	T2

S.L. Stato limite	TR Tempo ritorno [anni]	ag [m/s²]	F0 [-]	TC* [sec]
S.L.O.	30.0	0.26	2.55	0.19
S.L.D.	35.0	0.3	2.57	0.2
S.L.V.	332.0	1.17	2.44	0.28
S.L.C.	682.0	1.6	2.47	0.3

Coefficienti sismici orizzontali e verticali

Opera: Opere di sostegno

S.L. Stato limite	amax [m/s²]	beta [-]	kh [-]	kv [sec]
S.L.O.	0.312	0.2	0.0064	0.0032
S.L.D.	0.36	0.2	0.0073	0.0037
S.L.V.	1.404	0.29	0.0415	0.0208
S.L.C.	1.92	0.29	0.0568	0.0284

Coefficiente azione sismica orizzontale	0.0064
Coefficiente azione sismica verticale	0.0032

Vertici profilo

N	X m	y m
1	-8.85	39.2
2	-4.14	38.94
3	-1.92	38.15
4	2.64	37.32
5	10.07	36.34
6	16.25	34.87
7	18.59	34.6
8	28.01	32.83
9	41.16	30.06
10	62.46	27.22
11	69.07	26.47
12	73.49	23.7
13	78.56	21.99
14	83.22	20.28
15	87.87	20.21
16	88.68	19.5

Vertici strato 1

N	X m	y m
1	-8.85	37.0
2	-4.0	36.7
3	72.69	21.26
4	88.68	16.0

Stratigrafia

c: coesione; Fi: Angolo di attrito; G: Peso Specifico; Gs: Peso Specifico Saturo; K: Modulo di Winkler

Strato	c (kN/m²)	Fi (°)	G (Kg/m³)	Gs (Kg/m³)	K (Kg/cm³)	Litologia	
1	0	36	1900	2100	0.00		Sabbia e ghiaie denso
2	0	45	2300	2500	0.00		Substrato roccioso

Risultati analisi pendio

Fs minimo individuato	20.0
Ascissa centro superficie	38.17 m
Ordinata centro superficie	33.52 m
Raggio superficie	5.82 m

Numero di superfici esaminate....(221)

N°	Xo	Yo	Ro	Fs
1	38.2	33.5	5.8	20.00
2	38.9	34.0	4.6	20.00
3	39.7	33.5	4.3	20.00
4	40.4	34.0	5.9	20.00
5	41.2	33.5	4.3	20.00
6	41.9	34.0	5.6	20.00
7	42.7	33.5	5.6	20.00
8	43.4	34.0	5.4	20.00
9	44.2	33.5	5.3	20.00
10	44.9	34.0	5.6	20.00
11	45.7	33.5	7.2	20.00
12	46.4	34.0	7.2	20.00
13	47.1	33.5	6.9	20.00
14	47.9	34.0	9.3	20.00
15	48.6	33.5	8.9	20.00
16	49.4	34.0	9.5	20.00
17	50.1	33.5	10.8	20.00
18	50.9	34.0	11.4	20.00
19	51.6	33.5	12.6	20.00
20	52.4	34.0	13.0	20.00
21	53.1	33.5	12.7	20.00
22	38.2	34.5	6.2	20.00
23	38.9	35.0	5.9	20.00
24	39.7	34.5	5.9	20.00
25	40.4	35.0	5.7	20.00
26	41.2	34.5	5.6	20.00
27	41.9	35.0	5.9	20.00
28	42.7	34.5	5.8	20.00
29	43.4	35.0	5.7	20.00
30	44.2	34.5	5.6	20.00
31	44.9	35.0	7.9	20.00
32	45.7	34.5	7.6	20.00
33	46.4	35.0	8.2	20.00
34	47.1	34.5	7.9	20.00
35	47.9	35.0	9.9	20.00
36	48.6	34.5	9.9	20.00
37	49.4	35.0	9.9	20.00
38	50.1	34.5	11.5	20.00
39	50.9	35.0	11.6	20.00
40	51.6	34.5	11.5	20.00
41	52.4	35.0	13.4	20.00
42	53.1	34.5	13.2	20.00
43	38.2	35.5	7.8	20.00
44	38.9	36.0	8.2	20.00
45	39.7	35.5	6.0	20.00
46	40.4	36.0	7.9	20.00
47	41.2	35.5	5.9	20.00
48	41.9	36.0	8.1	20.00
49	42.7	35.5	6.0	20.00
50	43.4	36.0	8.1	20.00

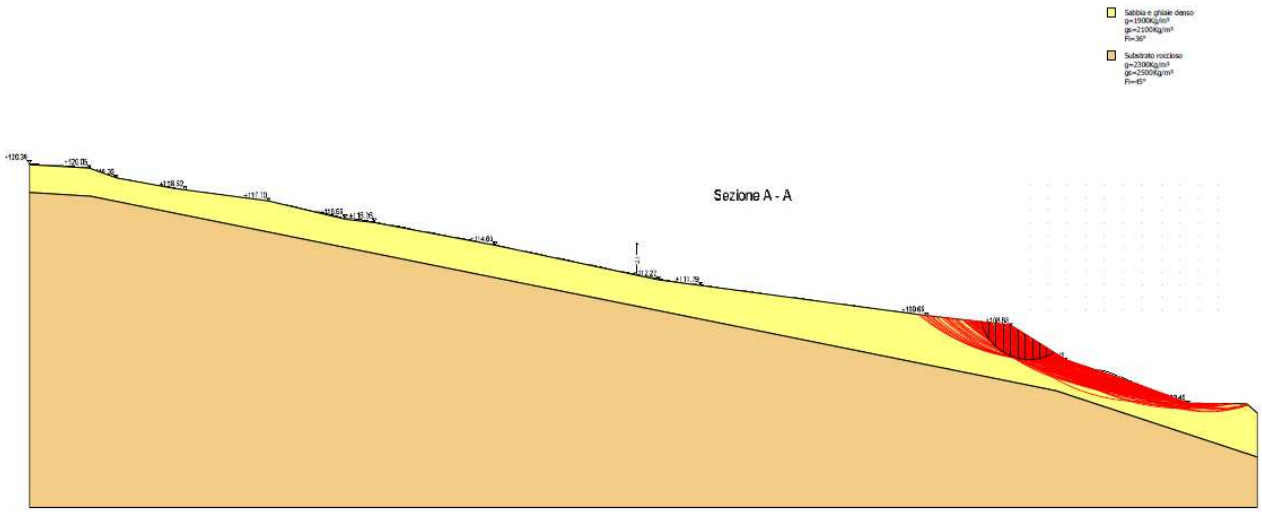
51	44.2	35.5	6.3	20.00
52	44.9	36.0	8.0	20.00
53	45.7	35.5	8.1	20.00
54	46.4	36.0	8.0	20.00
55	47.1	35.5	9.9	20.00
56	47.9	36.0	9.9	20.00
57	48.6	35.5	9.9	20.00
58	49.4	36.0	11.9	20.00
59	50.1	35.5	11.7	20.00
60	50.9	36.0	11.9	20.00
61	51.6	35.5	13.6	20.00
62	52.4	36.0	13.9	20.00
63	53.1	35.5	13.6	20.00
64	38.2	36.5	8.2	20.00
65	38.9	37.0	8.5	20.00
66	39.7	36.5	8.1	20.00
67	40.4	37.0	8.6	20.00
68	41.2	36.5	8.2	20.00
69	41.9	37.0	8.7	20.00
70	42.7	36.5	8.2	20.00
71	43.4	37.0	8.7	20.00
72	44.2	36.5	8.3	20.00
73	44.9	37.0	8.8	20.00
74	45.7	36.5	8.3	20.00
75	46.4	37.0	8.8	20.00
76	47.1	36.5	10.4	20.00
77	47.9	37.0	10.9	20.00
78	48.6	36.5	10.4	20.00
79	49.4	37.0	10.9	20.00
80	50.1	36.5	12.4	20.00
81	50.9	37.0	12.8	20.00
82	51.6	36.5	12.4	20.00
83	52.4	37.0	14.6	20.00
84	53.1	36.5	14.2	20.00
85	38.2	37.5	8.9	20.00
86	38.9	38.0	9.5	20.00
87	39.7	37.5	9.1	20.00
88	40.4	38.0	9.6	20.00
89	41.2	37.5	9.2	20.00
90	41.9	38.0	9.7	20.00
91	42.7	37.5	9.2	20.00
92	43.4	38.0	9.7	20.00
93	44.2	37.5	9.3	20.00
94	44.9	38.0	9.8	20.00
95	45.7	37.5	9.3	20.00
96	46.4	38.0	9.8	20.00
97	47.1	37.5	11.3	20.00
98	47.9	38.0	11.6	20.00
99	48.6	37.5	11.4	20.00
100	49.4	38.0	13.3	20.00
101	50.1	37.5	13.1	20.00
102	50.9	38.0	13.1	20.00
103	51.6	37.5	14.9	20.00
104	52.4	38.0	15.5	20.00
105	53.1	37.5	15.1	20.00
106	38.2	38.5	9.8	20.00
107	38.9	39.0	10.5	20.00
108	39.7	38.5	10.1	20.00
109	40.4	39.0	10.6	20.00
110	41.2	38.5	10.1	20.00
111	41.9	39.0	10.7	20.00
112	42.7	38.5	10.2	20.00
113	43.4	39.0	10.7	20.00
114	44.2	38.5	10.2	20.00
115	44.9	39.0	10.4	20.00
116	45.7	38.5	10.3	20.00
117	46.4	39.0	12.1	20.00
118	47.1	38.5	11.9	20.00
119	47.9	39.0	11.7	20.00
120	48.6	38.5	11.5	20.00
121	49.4	39.0	13.7	20.00
122	50.1	38.5	13.4	20.00
123	50.9	39.0	14.0	20.00
124	51.6	38.5	13.7	20.00
125	52.4	39.0	14.3	20.00
126	53.1	38.5	16.1	20.00
127	38.2	39.5	10.8	20.00
128	38.9	40.0	11.4	20.00

129	39.7	39.5	11.1	20.00
130	40.4	40.0	11.6	20.00
131	41.2	39.5	11.1	20.00
132	41.9	40.0	11.3	20.00
133	42.7	39.5	11.1	20.00
134	43.4	40.0	10.8	20.00
135	44.2	39.5	10.6	20.00
136	44.9	40.0	12.6	20.00
137	45.7	39.5	12.3	20.00
138	46.4	40.0	12.2	20.00
139	47.1	39.5	11.9	20.00
140	47.9	40.0	14.3	20.00
141	48.6	39.5	14.0	20.00
142	49.4	40.0	14.6	20.00
143	50.1	39.5	14.3	20.00
144	50.9	40.0	15.0	20.00
145	51.6	39.5	14.6	20.00
146	52.4	40.0	15.3	20.00
147	53.1	39.5	17.0	20.00
148	38.2	40.4	11.7	20.00
149	38.9	40.9	12.1	20.00
150	39.7	40.4	12.0	20.00
151	40.4	40.9	11.7	20.00
152	41.2	40.4	11.5	20.00
153	41.9	40.9	11.2	20.00
154	42.7	40.4	11.0	20.00
155	43.4	40.9	13.0	20.00
156	44.2	40.4	12.8	20.00
157	44.9	40.9	12.7	20.00
158	45.7	40.4	12.4	20.00
159	46.4	40.9	12.5	20.00
160	47.1	40.4	12.2	20.00
161	47.9	40.9	12.9	20.00
162	48.6	40.4	14.9	20.00
163	49.4	40.9	15.6	20.00
164	50.1	40.4	15.3	20.00
165	50.9	40.9	15.9	20.00
166	51.6	40.4	15.6	20.00
167	52.4	40.9	16.2	20.00
168	53.1	40.4	15.9	20.00
169	38.2	41.4	12.3	20.00
170	38.9	41.9	14.3	20.00
171	39.7	41.4	11.8	20.00
172	40.4	41.9	13.9	20.00
173	41.2	41.4	13.7	20.00
174	41.9	41.9	13.5	20.00
175	42.7	41.4	13.3	20.00
176	43.4	41.9	13.1	20.00
177	44.2	41.4	12.9	20.00
178	44.9	41.9	13.0	20.00
179	45.7	41.4	12.7	20.00
180	46.4	41.9	13.4	20.00
181	47.1	41.4	13.1	20.00
182	47.9	41.9	13.8	20.00
183	48.6	41.4	15.9	20.00
184	49.4	41.9	16.5	20.00
185	50.1	41.4	16.2	20.00
186	50.9	41.9	16.8	20.00
187	51.6	41.4	16.5	20.00
188	52.4	41.9	17.1	20.00
189	53.1	41.4	16.8	20.00
190	38.2	42.4	14.6	20.00
191	38.9	42.9	14.4	20.00
192	39.7	42.4	14.2	20.00
193	40.4	42.9	14.0	20.00
194	41.2	42.4	13.8	20.00
195	41.9	42.9	13.6	20.00
196	42.7	42.4	13.4	20.00
197	43.4	42.9	13.5	20.00
198	44.2	42.4	13.3	20.00
199	44.9	42.9	13.9	20.00
200	45.7	42.4	13.7	20.00
201	46.4	42.9	14.3	20.00
202	47.1	42.4	14.0	20.00
203	47.9	42.9	14.7	20.00
204	48.6	42.4	16.8	20.00
205	49.4	42.9	17.4	20.00
206	50.1	42.4	17.1	20.00

207	50.9	42.9	17.7	20.00
208	51.6	42.4	17.4	20.00
209	52.4	42.9	18.1	20.00
210	53.1	42.4	17.8	20.00
211	38.2	43.4	14.6	20.00
212	39.7	43.4	14.2	20.00
213	41.2	43.4	13.8	20.00
214	42.7	43.4	13.8	20.00
215	44.2	43.4	14.2	20.00
216	45.7	43.4	14.6	20.00
217	47.1	43.4	15.0	20.00
218	48.6	43.4	15.4	20.00
219	50.1	43.4	18.0	20.00
220	51.6	43.4	18.4	20.00
221	53.1	43.4	18.5	20.00

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VERIFICA DI STABILITA' – V3 – (Condizioni sismiche) – Pendio parte bassa



Analisi di stabilità dei pendii con MORGENSTERN-PRICE

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Numero di strati	2.0
Numero dei conci	10.0
Fattore di sicurezza [R2]	1.3

Superficie di forma circolare

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Maglia dei Centri

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Ascissa vertice sinistro inferiore xi	70.57 m
Ordinata vertice sinistro inferiore yi	27.67 m
Ascissa vertice destro superiore xs	85.53 m
Ordinata vertice destro superiore ys	37.56 m
Passo di ricerca	10.0
Numero di celle lungo x	10.0
Numero di celle lungo y	10.0

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Coefficienti sismici [N.T.C.]

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Dati generali

Descrizione:	
Latitudine:	43.85
Longitudine:	7.58

Tipo opera: 2 - Opere ordinarie
Classe d'uso: Classe I
Vita nominale: 50.0 [anni]
Vita di riferimento: 35.0 [anni]

Parametri sismici su sito di riferimento

Categoria sottosuolo: A
Categoria topografica: T2

S.L. Stato limite	TR Tempo ritorno [anni]	ag [m/s²]	F0 [-]	TC* [sec]
S.L.O.	30.0	0.26	2.55	0.19
S.L.D.	35.0	0.3	2.57	0.2
S.L.V.	332.0	1.17	2.44	0.28
S.L.C.	682.0	1.6	2.47	0.3

Coefficienti sismici orizzontali e verticali

Opera: Opere di sostegno

S.L. Stato limite	amax [m/s²]	beta [-]	kh [-]	kv [sec]
S.L.O.	0.312	0.2	0.0064	0.0032
S.L.D.	0.36	0.2	0.0073	0.0037
S.L.V.	1.404	0.29	0.0415	0.0208
S.L.C.	1.92	0.29	0.0568	0.0284

Coefficiente azione sismica orizzontale 0.0064
Coefficiente azione sismica verticale 0.0032

Vertici profilo

N	X m	y m
1	-8.85	39.2
2	-4.14	38.94
3	-1.92	38.15
4	2.64	37.32
5	10.07	36.34
6	16.25	34.87
7	18.59	34.6
8	28.01	32.83
9	41.16	30.06
10	62.46	27.22
11	69.07	26.47
12	73.49	23.7
13	78.56	21.99
14	83.22	20.28
15	87.87	20.21
16	88.68	19.5

Vertici strato 1

N	X m	y m
1	-8.85	37.0
2	-4.0	36.7
3	72.69	21.26
4	88.68	16.0

Stratigrafia

c: coesione; Fi: Angolo di attrito; G: Peso Specifico; Gs: Peso Specifico Saturo; K: Modulo di Winkler

Strato	c (kN/m²)	Fi (°)	G (Kg/m³)	Gs (Kg/m³)	K (Kg/cm³)	Litologia	
1	0	36	1900	2100	0.00		Sabbia e ghiaie denso
2	0	45	2300	2500	0.00		Substrato roccioso

Risultati analisi pendio

Fs minimo individuato	20.0
Ascissa centro superficie	70.57 m
Ordinata centro superficie	27.67 m
Raggio superficie	3.91 m

Numero di superfici esaminate....(201)

N°	Xo	Yo	Ro	Fs
1	70.6	27.7	3.9	20.00
2	71.3	28.2	3.7	20.00
3	72.1	27.7	3.8	20.00
4	72.8	28.2	4.8	20.00
5	73.6	27.7	4.8	20.00
6	74.3	28.2	4.9	20.00
7	75.1	27.7	4.6	20.00
8	75.8	28.2	6.0	20.00
9	76.6	27.7	5.8	20.00
10	77.3	28.2	6.1	20.00
11	78.1	27.7	5.8	20.00
12	78.8	28.2	7.2	20.00
13	79.5	27.7	6.9	20.00
14	80.3	28.2	7.4	20.00
15	81.0	27.7	6.8	20.00
16	81.8	28.2	8.0	20.00
17	82.5	27.7	7.2	20.00
18	83.3	28.2	8.3	20.00
19	84.0	27.7	7.6	20.00
20	70.6	28.7	3.8	20.00
21	71.3	29.2	5.5	20.00
22	72.1	28.7	5.0	20.00
23	72.8	29.2	5.6	20.00
24	73.6	28.7	5.1	20.00
25	74.3	29.2	5.7	20.00
26	75.1	28.7	6.4	20.00
27	75.8	29.2	7.0	20.00
28	76.6	28.7	6.5	20.00
29	77.3	29.2	7.8	20.00
30	78.1	28.7	7.5	20.00
31	78.8	29.2	8.1	20.00
32	79.5	28.7	7.8	20.00
33	80.3	29.2	8.3	20.00
34	81.0	28.7	7.6	20.00
35	81.8	29.2	8.8	20.00
36	82.5	28.7	8.1	20.00
37	83.3	29.2	9.2	20.00
38	84.0	28.7	8.5	20.00
39	84.8	29.2	9.6	20.00
40	85.5	28.7	8.9	20.00
41	70.6	29.6	4.7	20.00
42	71.3	30.1	5.2	20.00
43	72.1	29.6	6.0	20.00
44	72.8	30.1	6.6	20.00
45	73.6	29.6	6.1	20.00
46	74.3	30.1	6.4	20.00
47	75.1	29.6	7.4	20.00
48	75.8	30.1	7.2	20.00
49	76.6	29.6	6.9	20.00
50	77.3	30.1	8.6	20.00
51	78.1	29.6	8.3	20.00
52	78.8	30.1	9.0	20.00
53	79.5	29.6	8.7	20.00
54	80.3	30.1	9.1	20.00
55	81.0	29.6	8.4	20.00
56	81.8	30.1	9.7	20.00
57	82.5	29.6	9.0	20.00
58	83.3	30.1	10.1	20.00
59	84.0	29.6	9.4	20.00
60	84.8	30.1	10.5	20.00
61	85.5	29.6	9.8	20.00
62	70.6	30.6	5.6	20.00
63	71.3	31.1	6.2	20.00

64	72.1	30.6	7.0	20.00
65	72.8	31.1	7.0	20.00
66	73.6	30.6	6.7	20.00
67	74.3	31.1	7.8	20.00
68	75.1	30.6	7.5	20.00
69	75.8	31.1	9.1	20.00
70	76.6	30.6	8.8	20.00
71	77.3	31.1	9.5	20.00
72	78.1	30.6	9.2	20.00
73	78.8	31.1	9.9	20.00
74	79.5	30.6	9.6	20.00
75	80.3	31.1	9.8	20.00
76	81.0	30.6	9.3	20.00
77	81.8	31.1	10.4	20.00
78	82.5	30.6	9.9	20.00
79	83.3	31.1	10.8	20.00
80	84.0	30.6	10.3	20.00
81	85.5	30.6	10.7	20.00
82	70.6	31.6	6.6	20.00
83	71.3	32.1	7.5	20.00
84	72.1	31.6	7.2	20.00
85	72.8	32.1	8.4	20.00
86	73.6	31.6	8.1	20.00
87	74.3	32.1	9.6	20.00
88	75.1	31.6	9.3	20.00
89	75.8	32.1	10.0	20.00
90	76.6	31.6	9.7	20.00
91	77.3	32.1	10.4	20.00
92	78.1	31.6	10.1	20.00
93	78.8	32.1	10.4	20.00
94	79.5	31.6	10.2	20.00
95	80.3	32.1	11.2	20.00
96	81.0	31.6	10.8	20.00
97	81.8	32.1	11.9	20.00
98	82.5	31.6	11.4	20.00
99	83.3	32.1	11.4	20.00
100	84.8	32.1	12.1	20.00
101	70.6	32.6	7.8	20.00
102	71.3	33.1	9.0	20.00
103	72.1	32.6	8.7	20.00
104	72.8	33.1	8.5	20.00
105	73.6	32.6	8.2	20.00
106	74.3	33.1	10.5	20.00
107	75.1	32.6	10.2	20.00
108	75.8	33.1	10.7	20.00
109	76.6	32.6	10.6	20.00
110	77.3	33.1	10.6	20.00
111	78.1	32.6	10.5	20.00
112	78.8	33.1	12.1	20.00
113	79.5	32.6	11.7	20.00
114	80.3	33.1	11.5	20.00
115	81.0	32.6	11.1	20.00
116	81.8	33.1	12.4	20.00
117	82.5	32.6	11.9	20.00
118	83.3	33.1	13.3	20.00
119	84.0	32.6	12.7	20.00
120	84.8	33.1	12.8	20.00
121	70.6	33.6	9.3	20.00
122	71.3	34.1	9.1	20.00
123	72.1	33.6	8.8	20.00
124	72.8	34.1	9.2	20.00
125	73.6	33.6	9.0	20.00
126	74.3	34.1	10.9	20.00
127	75.1	33.6	10.8	20.00
128	75.8	34.1	10.9	20.00
129	76.6	33.6	10.8	20.00
130	77.3	34.1	12.6	20.00
131	78.1	33.6	12.4	20.00
132	78.8	34.1	12.4	20.00
133	79.5	33.6	12.0	20.00
134	80.3	34.1	13.5	20.00
135	81.0	33.6	12.9	20.00
136	81.8	34.1	12.9	20.00
137	70.6	34.6	9.3	20.00
138	71.3	35.1	9.6	20.00
139	72.1	34.6	11.1	20.00
140	72.8	35.1	11.5	20.00
141	73.6	34.6	11.0	20.00

142	74.3	35.1	11.5	20.00
143	75.1	34.6	11.1	20.00
144	75.8	35.1	11.6	20.00
145	76.6	34.6	12.9	20.00
146	77.3	35.1	13.4	20.00
147	78.1	34.6	12.9	20.00
148	78.8	35.1	13.2	20.00
149	79.5	34.6	14.2	20.00
150	80.3	35.1	14.3	20.00
151	81.0	34.6	13.6	20.00
152	81.8	35.1	13.8	20.00
153	82.5	34.6	14.7	20.00
154	83.3	35.1	14.9	20.00
155	84.0	34.6	14.3	20.00
156	70.6	35.6	11.7	20.00
157	71.3	36.1	12.4	20.00
158	72.1	35.6	12.0	20.00
159	72.8	36.1	12.5	20.00
160	73.6	35.6	12.0	20.00
161	74.3	36.1	12.5	20.00
162	75.1	35.6	12.1	20.00
163	75.8	36.1	12.6	20.00
164	76.6	35.6	12.1	20.00
165	77.3	36.1	14.4	20.00
166	78.1	35.6	13.9	20.00
167	78.8	36.1	14.0	20.00
168	79.5	35.6	13.3	20.00
169	80.3	36.1	15.2	20.00
170	81.0	35.6	14.5	20.00
171	81.8	36.1	14.7	20.00
172	83.3	36.1	15.9	20.00
173	84.8	36.1	15.5	20.00
174	70.6	36.6	12.6	20.00
175	71.3	37.1	13.2	20.00
176	72.1	36.6	13.0	20.00
177	72.8	37.1	13.5	20.00
178	73.6	36.6	13.0	20.00
179	74.3	37.1	13.5	20.00
180	75.1	36.6	13.0	20.00
181	75.8	37.1	13.6	20.00
182	76.6	36.6	13.1	20.00
183	77.3	37.1	15.4	20.00
184	78.1	36.6	14.7	20.00
185	78.8	37.1	14.9	20.00
186	79.5	36.6	14.2	20.00
187	80.3	37.1	16.1	20.00
188	81.0	36.6	15.4	20.00
189	81.8	37.1	15.7	20.00
190	82.5	36.6	16.6	20.00
191	83.3	37.1	16.8	20.00
192	84.8	37.1	16.5	20.00
193	70.6	37.6	13.5	20.00
194	72.1	37.6	13.9	20.00
195	73.6	37.6	14.0	20.00
196	75.1	37.6	14.0	20.00
197	76.6	37.6	14.1	20.00
198	78.1	37.6	15.6	20.00
199	79.5	37.6	15.2	20.00
200	81.0	37.6	16.4	20.00
201	82.5	37.6	17.5	20.00

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