

**“ESTUDIO Y DISEÑO DEFINITIVO DE LA VÍA
SAN ANTONIO – SAN MIGUEL, EN LOS
CANTONES GUAYAQUIL Y PLAYAS, DE LA
PROVINCIA DEL GUAYAS”**

TALUDES Y TERRAPLENES

ANEXO: ANALISIS ESTABILIDAD ESTRIBO IZQUIERDO

ABSCISA Km 7+295



Marco Apunte Ordóñez
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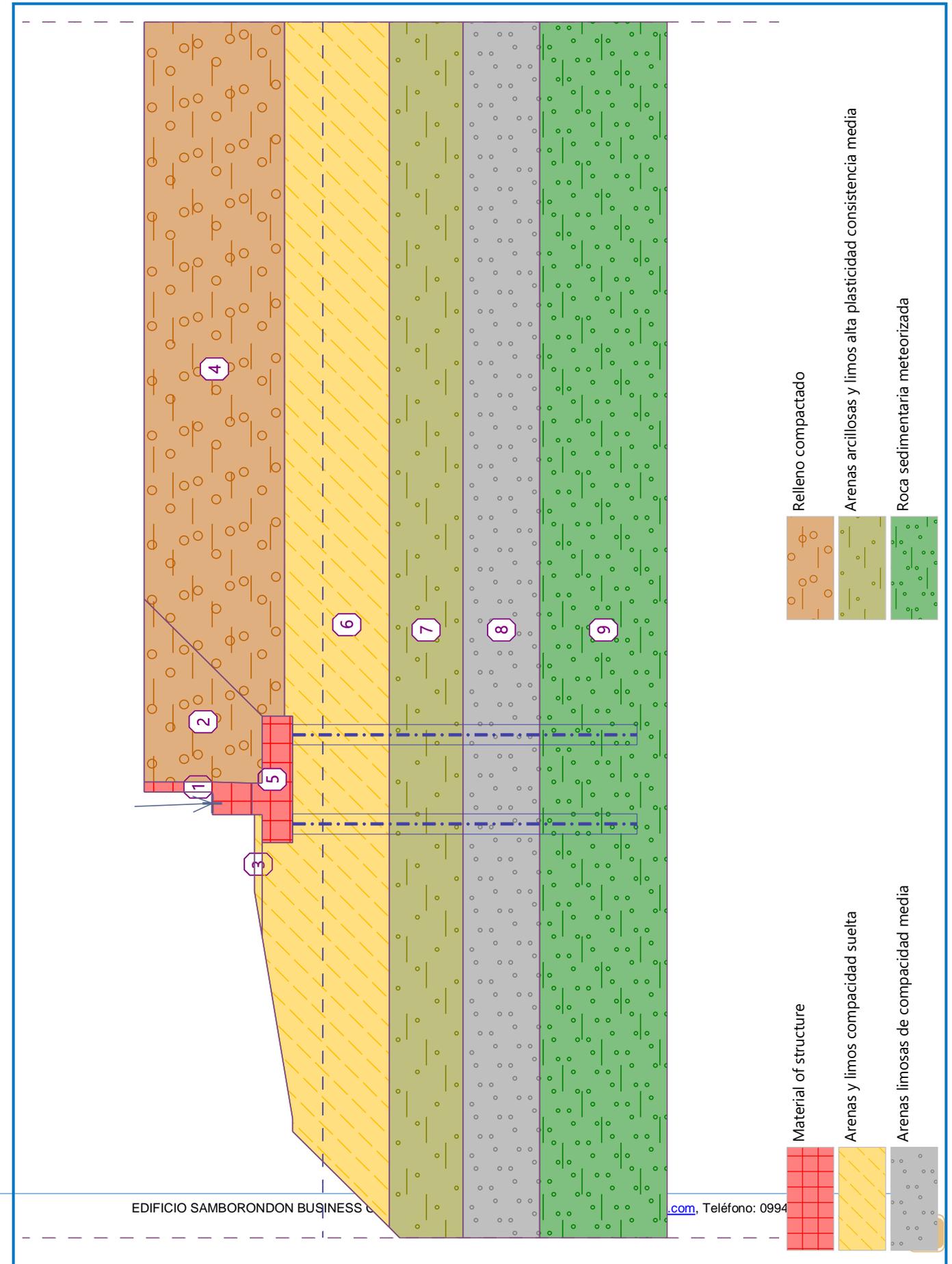


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Estudios y Fiscalización de Obras
Civiles, Vías, Estructuras, Drenes

Name :

Stage : 1





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Slope stability analysis

Input data

Project

Settings

USA - LRFD

Stability analysis

Verification methodology : according to LRFD

Earthquake analysis : Standard

Load factors			
Design situation - Service I			
		Minimum	Maximum
Earth surcharge load (permanent) :	ES =	1.00 [-]	1.00 [-]
Live load surcharge :	LL =	0.00 [-]	1.00 [-]

Resistance factors			
Design situation - Service I			
Resistance factor on stability :	$\phi_{SS} =$	0.65 [-]	

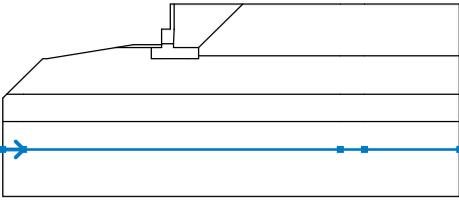
Interface

No.	Interface location	Coordinates of interface points [m]					
		x	z	x	z	x	z
1		-1.30	7.60	-0.05	7.60	0.00	9.10
		0.00	9.15	0.00	11.82		
2		-2.40	7.20	-2.40	6.00	-2.06	6.00
		-1.26	6.00	1.46	6.00	2.26	6.00
		2.60	6.00	2.60	6.32	2.60	7.20
		7.22	11.82				

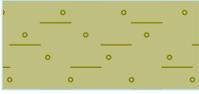
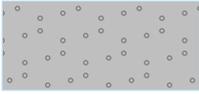
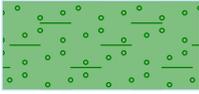
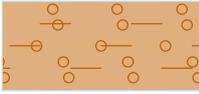


No.	Interface location	Coordinates of interface points [m]					
		x	z	x	z	x	z
3		-18.00	1.80	-17.58	2.22	-15.80	4.00
		-13.80	6.00	-13.30	6.00	-6.10	7.20
		-4.30	7.50	-1.30	7.50	-1.30	7.60
		-1.30	9.15	-0.40	9.15	-0.40	11.82
		0.00	11.82	7.22	11.82	17.46	11.82
		20.00	11.82	30.00	11.82		
4		-0.05	7.60	-0.05	7.20	2.60	7.20
5		-6.10	7.20	-2.40	7.20	-1.30	7.20
		-1.30	7.50				
6		2.60	6.32	17.46	6.32	20.00	6.32
		30.00	6.32				
7		-17.58	2.22	-15.80	2.22	17.46	2.22
		20.00	2.22	30.00	2.22		
8		-18.00	-0.68	-15.80	-0.68	17.46	-0.68
		20.00	-0.68	30.00	-0.68		

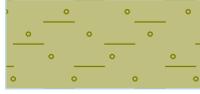


No.	Interface location	Coordinates of interface points [m]					
		x	z	x	z	x	z
9		-18.00	-3.68	-15.80	-3.68	17.46	-3.68
		20.00	-3.68	30.00	-3.68		

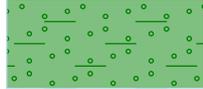
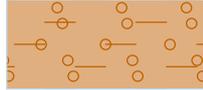
Soil parameters - effective stress state

No.	Name	Pattern	Φ_{ef} [°]	C_{ef} [kPa]	γ [kN/m ³]
1	Arenas y limos compacidad suelta		29.70	10.00	17.00
2	Arenas arcillosas y limos alta plasticidad consistencia media		17.00	35.00	17.00
3	Arenas limosas de compacidad media		38.60	10.00	18.00
4	Roca sedimentaria meteorizada		32.00	200.00	20.00
5	Relleno compactado		35.00	8.00	19.00

Soil parameters - uplift

No.	Name	Pattern	γ_{sat} [kN/m ³]	γ_s [kN/m ³]	n [-]
1	Arenas y limos compacidad suelta		18.00		
2	Arenas arcillosas y limos alta plasticidad consistencia media		18.00		



No.	Name	Pattern	γ_{sat} [kN/m ³]	γ_s [kN/m ³]	n [-]
3	Arenas limosas de compacidad media		19.00		
4	Roca sedimentaria meteorizada		21.00		
5	Relleno compactado		20.00		

Soil parameters

Arenas y limos compacidad suelta

Unit weight : $\gamma = 17.00 \text{ kN/m}^3$

Stress-state : effective

Angle of internal friction : $\varphi_{ef} = 29.70^\circ$

Cohesion of soil : $c_{ef} = 10.00 \text{ kPa}$

Saturated unit weight : $\gamma_{sat} = 18.00 \text{ kN/m}^3$

Arenas arcillosas y limos alta plasticidad consistencia media

Unit weight : $\gamma = 17.00 \text{ kN/m}^3$

Stress-state : effective

Angle of internal friction : $\varphi_{ef} = 17.00^\circ$

Cohesion of soil : $c_{ef} = 35.00 \text{ kPa}$

Saturated unit weight : $\gamma_{sat} = 18.00 \text{ kN/m}^3$

Arenas limosas de compacidad media

Unit weight : $\gamma = 18.00 \text{ kN/m}^3$

Stress-state : effective

Angle of internal friction : $\varphi_{ef} = 38.60^\circ$

Cohesion of soil : $c_{ef} = 10.00 \text{ kPa}$

Saturated unit weight : $\gamma_{sat} = 19.00 \text{ kN/m}^3$

Roca sedimentaria meteorizada

Unit weight : $\gamma = 20.00 \text{ kN/m}^3$

Stress-state : effective



Angle of internal friction : $\varphi_{ef} = 32.00^\circ$
 Cohesion of soil : $c_{ef} = 200.00 \text{ kPa}$
 Saturated unit weight : $\gamma_{sat} = 21.00 \text{ kN/m}^3$

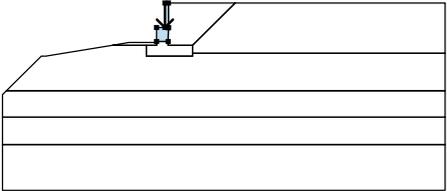
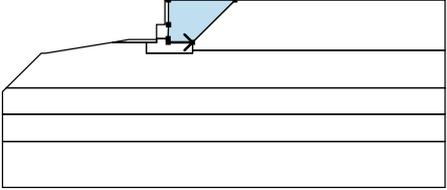
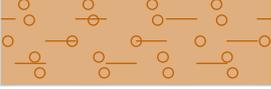
Relleno compactado

Unit weight : $\gamma = 19.00 \text{ kN/m}^3$
 Stress-state : effective
 Angle of internal friction : $\varphi_{ef} = 35.00^\circ$
 Cohesion of soil : $c_{ef} = 8.00 \text{ kPa}$
 Saturated unit weight : $\gamma_{sat} = 20.00 \text{ kN/m}^3$

Rigid Bodies

No.	Name	Sample	γ [kN/m ³]
1	Material of structure		23.00

Assigning and surfaces

No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
1		-0.40	11.82	-0.40	9.15	Material of structure
		-1.30	9.15	-1.30	7.60	
		-0.05	7.60	0.00	9.10	
		0.00	9.15	0.00	11.82	
2		-0.05	7.20	2.60	7.20	Relleno compactado
		7.22	11.82	0.00	11.82	
		0.00	9.15	0.00	9.10	
		-0.05	7.60			



No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
3		-2.40	7.20	-1.30	7.20	Arenas y limos compacidad suelta
		-1.30	7.50	-4.30	7.50	
		-6.10	7.20			
4		17.46	6.32	20.00	6.32	Relleno compactado
		30.00	6.32	30.00	11.82	
		20.00	11.82	17.46	11.82	
		7.22	11.82	2.60	7.20	
		2.60	6.32			
5		-1.30	7.20	-2.40	7.20	Material of structure
		-2.40	6.00	-2.06	6.00	
		-1.26	6.00	1.46	6.00	
		2.26	6.00	2.60	6.00	
		2.60	6.32	2.60	7.20	
		-0.05	7.20	-0.05	7.60	
		-1.30	7.60	-1.30	7.50	
6		-15.80	2.22	17.46	2.22	Arenas y limos compacidad suelta
		20.00	2.22	30.00	2.22	
		30.00	6.32	20.00	6.32	
		17.46	6.32	2.60	6.32	
		2.60	6.00	2.26	6.00	
		1.46	6.00	-1.26	6.00	
		-2.06	6.00	-2.40	6.00	
		-2.40	7.20	-6.10	7.20	
		-13.30	6.00	-13.80	6.00	
-15.80	4.00	-17.58	2.22			



No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
7		-15.80	-0.68	17.46	-0.68	Arenas arcillosas y limos alta plasticidad consistencia media
		20.00	-0.68	30.00	-0.68	
		30.00	2.22	20.00	2.22	
		17.46	2.22	-15.80	2.22	
		-17.58	2.22	-18.00	1.80	
		-18.00	-0.68			
8		-15.80	-3.68	17.46	-3.68	Arenas limosas de compacidad media
		20.00	-3.68	30.00	-3.68	
		30.00	-0.68	20.00	-0.68	
		17.46	-0.68	-15.80	-0.68	
		-18.00	-0.68	-18.00	-3.68	
9		20.00	-3.68	17.46	-3.68	Roca sedimentaria meteorizada
		-15.80	-3.68	-18.00	-3.68	
		-18.00	-8.68	30.00	-8.68	
		30.00	-3.68			

Anti-Slide piles

No.	Point		Length l [m]	Construction type	Depth of beam h [m]	Length of beam l _b [m]	Pile spacing	
	x [m]	z [m]					b _f [m]	b/b _b [m]
1	-1.66	6.00	13.50	standard wall				2.96
2	1.86	6.00	13.50	standard wall				3.94

No.	Cross-section [m]	Pile bearing capacity			
		Distribution along the pile	Max. bearing capacity V _u [kN]	Gradient K [-]	Passive force direction
1	d = 0.80	constant	2400.00		perpendicular to pile



No.	Cross-section [m]	Pile bearing capacity			
		Distribution along the pile	Max. bearing capacity V_u [kN]	Gradient K [-]	Passive force direction
2	d = 0.80	constant	2400.00		perpendicular to pile

Surcharge

No.	Type	Type of action	Location	Origin	Length	Width	Slope	Magnitude		
			z [m]	x [m]	l [m]	b [m]	α [°]	q, q ₁ , f, F, x	q ₂ , z	unit
1	line	permanent	z = 9.15	x = -0.85			-2.30	300.02		kN/m

Surcharges

No.	Name
1	Bridge

Water

Water type : GWT

No.	GWT location	Coordinates of GWT points [m]					
		x	z	x	z	x	z
1		-18.00	4.82	-15.80	4.82	0.00	4.82
		17.46	4.82	20.00	4.82	30.00	4.82

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : Service I

Results (Stage of construction 1)

Analysis 1 (stage 1)



Circular slip surface

Slip surface parameters					
Center :	x =	0.45 [m]	Angles :	$\alpha_1 =$	-55.55 [°]
	z =	14.52 [m]		$\alpha_2 =$	82.99 [°]
Radius :	R =	22.13 [m]			
The slip surface after optimization.					

The forces acting on the pile

Anti-Slide Pile No. 1 (-1.66; 6.00 [m])

The forces acting on the pile cannot be computed - the pile is below the terrain.

Anti-Slide Pile No. 2 (1.86; 6.00 [m])

The forces acting on the pile cannot be computed - the pile is below the terrain.

Slope stability verification (Morgenstern-Price)

Utilization : 16.7 %

CDR CDR: 5.986

Slope stability ACCEPTABLE

Optimization of circular slip surface (Morgenstern-Price)

No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
1	4.93	12.10	24.87	10.7 %	ACCEPTABLE
2	4.93	12.10	24.87	10.7 %	ACCEPTABLE
3	4.93	12.10	24.87	10.7 %	ACCEPTABLE
4	4.93	12.10	24.87	10.7 %	ACCEPTABLE
5	4.93	12.10	24.87	10.7 %	ACCEPTABLE
6	3.64	18.34	26.96	14.7 %	ACCEPTABLE
7	3.63	18.41	26.99	14.8 %	ACCEPTABLE
8	3.61	18.48	27.02	14.8 %	ACCEPTABLE
9	3.86	17.31	26.52	14.0 %	ACCEPTABLE
10	4.91	12.21	24.90	10.8 %	ACCEPTABLE
11	1.95	15.46	23.90	15.1 %	ACCEPTABLE
12	7.66	12.28	22.14	7.8 %	ACCEPTABLE
13	3.66	18.26	26.92	14.6 %	ACCEPTABLE
14	4.89	12.31	24.92	10.8 %	ACCEPTABLE
15	0.33	12.66	21.03	15.4 %	ACCEPTABLE
16	2.06	14.96	23.72	14.7 %	ACCEPTABLE
17	2.03	15.12	23.78	14.8 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
18	1.91	15.65	23.98	15.2 %	ACCEPTABLE
19	0.33	12.66	21.03	15.4 %	ACCEPTABLE
20	1.42	14.44	22.89	15.4 %	ACCEPTABLE
21	5.25	12.81	21.75	10.2 %	ACCEPTABLE
22	2.50	16.44	24.91	15.0 %	ACCEPTABLE
23	3.39	12.40	23.60	12.0 %	ACCEPTABLE
24	0.33	12.64	21.02	15.3 %	ACCEPTABLE
25	0.40	12.38	20.95	15.0 %	ACCEPTABLE
26	2.47	16.57	24.97	15.2 %	ACCEPTABLE
27	1.42	14.44	22.89	15.4 %	ACCEPTABLE
28	3.98	13.59	22.13	12.2 %	ACCEPTABLE
29	2.17	15.61	24.17	14.9 %	ACCEPTABLE
30	3.94	13.77	22.18	12.4 %	ACCEPTABLE
31	2.74	13.07	23.33	12.9 %	ACCEPTABLE
32	0.69	13.25	21.64	15.4 %	ACCEPTABLE
33	0.83	12.66	21.47	14.8 %	ACCEPTABLE
34	0.73	13.06	21.58	15.2 %	ACCEPTABLE
35	2.12	15.86	24.26	15.2 %	ACCEPTABLE
36	3.94	13.80	22.19	12.4 %	ACCEPTABLE
37	1.42	14.44	22.89	15.4 %	ACCEPTABLE
38	3.12	13.98	22.40	13.3 %	ACCEPTABLE
39	1.87	15.44	23.82	15.2 %	ACCEPTABLE
40	3.46	12.32	21.96	11.8 %	ACCEPTABLE
41	1.92	15.23	23.74	15.0 %	ACCEPTABLE
42	3.12	13.98	22.40	13.3 %	ACCEPTABLE
43	2.30	13.52	23.17	13.6 %	ACCEPTABLE
44	2.12	12.41	20.79	13.2 %	ACCEPTABLE
45	0.93	13.65	22.06	15.4 %	ACCEPTABLE
46	2.62	13.21	21.60	13.3 %	ACCEPTABLE
47	1.38	14.60	22.95	15.6 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
48	3.09	14.14	22.45	13.5 %	ACCEPTABLE
49	1.83	15.61	23.89	15.4 %	ACCEPTABLE
50	3.43	12.46	22.00	11.9 %	ACCEPTABLE
51	1.88	15.39	23.80	15.1 %	ACCEPTABLE
52	3.09	14.13	22.45	13.4 %	ACCEPTABLE
53	2.27	13.67	23.22	13.7 %	ACCEPTABLE
54	2.09	12.55	20.83	13.3 %	ACCEPTABLE
55	0.89	13.80	22.11	15.6 %	ACCEPTABLE
56	2.58	13.35	21.64	13.4 %	ACCEPTABLE
57	1.35	14.76	23.01	15.7 %	ACCEPTABLE
58	3.06	14.30	22.50	13.5 %	ACCEPTABLE
59	1.80	15.78	23.96	15.5 %	ACCEPTABLE
60	3.41	12.60	22.03	12.1 %	ACCEPTABLE
61	1.85	15.55	23.87	15.3 %	ACCEPTABLE
62	3.06	14.28	22.49	13.5 %	ACCEPTABLE
63	2.24	13.82	23.27	13.8 %	ACCEPTABLE
64	2.07	12.69	20.87	13.4 %	ACCEPTABLE
65	0.86	13.96	22.16	15.7 %	ACCEPTABLE
66	2.56	13.51	21.68	13.5 %	ACCEPTABLE
67	1.31	14.94	23.08	15.9 %	ACCEPTABLE
68	3.03	14.47	22.56	13.8 %	ACCEPTABLE
69	1.76	15.97	24.04	15.6 %	ACCEPTABLE
70	3.38	12.76	22.07	12.2 %	ACCEPTABLE
71	3.03	14.45	22.55	13.6 %	ACCEPTABLE
72	2.21	13.99	23.32	13.9 %	ACCEPTABLE
73	2.04	12.85	20.91	13.6 %	ACCEPTABLE
74	0.82	14.13	22.22	15.9 %	ACCEPTABLE
75	2.52	13.67	21.73	13.7 %	ACCEPTABLE
76	1.27	15.12	23.15	16.1 %	ACCEPTABLE
77	2.99	14.65	22.62	3.2 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
78	3.35	12.91	22.12	12.3 %	ACCEPTABLE
79	1.77	15.92	24.02	15.6 %	ACCEPTABLE
80	3.00	14.61	22.61	13.8 %	ACCEPTABLE
81	2.17	14.15	23.38	14.1 %	ACCEPTABLE
82	2.00	13.01	20.96	13.8 %	ACCEPTABLE
83	0.78	14.31	22.29	16.1 %	ACCEPTABLE
84	1.24	12.41	21.70	14.1 %	ACCEPTABLE
85	0.88	13.91	22.15	15.7 %	ACCEPTABLE
86	2.04	12.82	20.91	13.6 %	ACCEPTABLE
87	1.24	12.41	21.70	14.1 %	ACCEPTABLE
88	0.82	14.16	22.24	16.0 %	ACCEPTABLE
89	2.01	12.97	20.95	13.8 %	ACCEPTABLE
90	2.99	14.68	22.63	3.2 %	ACCEPTABLE
91	1.27	15.12	23.15	16.1 %	ACCEPTABLE
92	2.41	14.86	22.81	14.5 %	ACCEPTABLE
93	1.56	15.83	23.80	15.8 %	ACCEPTABLE
94	2.68	13.62	22.41	13.4 %	ACCEPTABLE
95	1.60	15.65	23.73	15.6 %	ACCEPTABLE
96	2.43	14.77	22.78	14.5 %	ACCEPTABLE
97	1.88	14.47	23.30	14.5 %	ACCEPTABLE
98	1.77	13.70	21.66	14.5 %	ACCEPTABLE
99	0.94	14.58	22.57	16.1 %	ACCEPTABLE
100	2.08	14.32	22.24	14.6 %	ACCEPTABLE
101	2.34	13.12	21.87	13.4 %	ACCEPTABLE
102	1.27	15.11	23.14	16.0 %	ACCEPTABLE
103	2.10	14.25	22.21	14.5 %	ACCEPTABLE
104	1.54	13.95	22.74	14.9 %	ACCEPTABLE
105	1.44	13.19	21.11	14.9 %	ACCEPTABLE
106	0.61	14.05	22.01	16.1 %	ACCEPTABLE
107	0.93	12.77	21.60	14.8 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
108	1.70	12.03	20.80	13.6 %	ACCEPTABLE
109	0.67	13.81	21.92	15.8 %	ACCEPTABLE
110	1.47	13.05	21.07	14.7 %	ACCEPTABLE
111	0.92	12.77	21.60	14.8 %	ACCEPTABLE
112	0.64	13.95	21.97	16.0 %	ACCEPTABLE
113	1.45	13.14	21.10	14.8 %	ACCEPTABLE
114	1.25	15.22	23.18	16.2 %	ACCEPTABLE
115	2.40	14.96	22.83	3.8 %	ACCEPTABLE
116	1.53	15.95	23.84	15.9 %	ACCEPTABLE
117	2.66	13.71	22.43	13.5 %	ACCEPTABLE
118	1.58	15.76	23.77	15.7 %	ACCEPTABLE
119	2.42	14.87	22.80	14.5 %	ACCEPTABLE
120	1.85	14.58	23.33	14.7 %	ACCEPTABLE
121	1.75	13.79	21.68	14.5 %	ACCEPTABLE
122	0.92	14.69	22.61	16.2 %	ACCEPTABLE
123	2.06	14.43	22.27	14.7 %	ACCEPTABLE
124	1.21	15.40	23.25	16.3 %	ACCEPTABLE
125	2.36	15.13	22.90	3.8 %	ACCEPTABLE
126	1.49	16.14	23.92	16.1 %	ACCEPTABLE
127	2.63	13.87	22.48	13.6 %	ACCEPTABLE
128	1.54	15.95	23.84	15.9 %	ACCEPTABLE
129	2.38	15.04	22.87	3.8 %	ACCEPTABLE
130	1.81	14.75	23.39	14.8 %	ACCEPTABLE
131	1.72	13.96	21.74	3.4 %	ACCEPTABLE
132	0.88	14.86	22.68	16.4 %	ACCEPTABLE
133	2.03	14.60	22.34	3.6 %	ACCEPTABLE
134	1.17	15.57	23.32	16.5 %	ACCEPTABLE
135	2.33	15.30	22.96	3.8 %	ACCEPTABLE
136	1.45	16.31	23.99	5.2 %	ACCEPTABLE
137	2.60	14.03	22.53	13.8 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
138	1.50	16.11	23.91	16.0 %	ACCEPTABLE
139	2.35	15.20	22.93	3.8 %	ACCEPTABLE
140	1.78	14.91	23.45	14.9 %	ACCEPTABLE
141	1.68	14.12	21.79	3.5 %	ACCEPTABLE
142	1.16	13.67	22.26	15.2 %	ACCEPTABLE
143	1.96	12.89	21.42	13.6 %	ACCEPTABLE
144	0.90	14.76	22.64	16.3 %	ACCEPTABLE
145	1.72	13.95	21.74	14.7 %	ACCEPTABLE
146	1.16	13.68	22.27	15.2 %	ACCEPTABLE
147	0.86	14.92	22.70	16.5 %	ACCEPTABLE
148	1.70	14.06	21.77	3.4 %	ACCEPTABLE
149	1.47	16.24	23.96	5.1 %	ACCEPTABLE
150	2.33	15.27	22.95	3.8 %	ACCEPTABLE
151	1.17	15.57	23.32	16.5 %	ACCEPTABLE
152	1.94	15.42	23.09	4.2 %	ACCEPTABLE
153	1.36	16.07	23.77	5.1 %	ACCEPTABLE
154	2.13	14.53	22.77	14.5 %	ACCEPTABLE
155	1.96	15.32	23.05	4.2 %	ACCEPTABLE
156	1.57	15.13	23.40	15.3 %	ACCEPTABLE
157	1.52	14.60	22.29	4.3 %	ACCEPTABLE
158	0.95	15.21	22.93	16.6 %	ACCEPTABLE
159	1.72	15.06	22.70	4.1 %	ACCEPTABLE
160	1.91	14.18	22.40	14.6 %	ACCEPTABLE
161	1.17	15.57	23.32	16.5 %	ACCEPTABLE
162	1.74	14.97	22.67	4.1 %	ACCEPTABLE
163	1.35	14.78	23.02	15.8 %	ACCEPTABLE
164	1.29	14.25	21.91	4.2 %	ACCEPTABLE
165	0.73	14.85	22.55	16.6 %	ACCEPTABLE
166	1.49	14.70	22.33	4.4 %	ACCEPTABLE
167	0.92	15.34	22.98	5.3 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
168	1.69	13.84	22.04	14.9 %	ACCEPTABLE
169	0.95	15.20	22.93	16.6 %	ACCEPTABLE
170	1.51	14.61	22.30	4.4 %	ACCEPTABLE
171	1.14	14.42	22.65	15.7 %	ACCEPTABLE
172	1.07	13.90	21.55	4.1 %	ACCEPTABLE
173	0.51	14.49	22.17	16.6 %	ACCEPTABLE
174	0.73	13.60	21.86	15.6 %	ACCEPTABLE
175	1.27	13.07	21.29	14.8 %	ACCEPTABLE
176	0.55	14.33	22.11	16.4 %	ACCEPTABLE
177	1.10	13.79	21.51	15.6 %	ACCEPTABLE
178	0.73	13.60	21.86	15.6 %	ACCEPTABLE
179	0.53	14.42	22.14	16.5 %	ACCEPTABLE
180	1.08	13.85	21.53	4.1 %	ACCEPTABLE
181	0.93	15.28	22.96	16.6 %	ACCEPTABLE
182	1.70	15.13	22.73	4.1 %	ACCEPTABLE
183	1.12	15.78	23.40	5.4 %	ACCEPTABLE
184	1.89	14.25	22.42	14.6 %	ACCEPTABLE
185	1.15	15.64	23.35	16.6 %	ACCEPTABLE
186	1.72	15.03	22.70	4.1 %	ACCEPTABLE
187	1.34	14.84	23.05	15.8 %	ACCEPTABLE
188	1.28	14.32	21.94	4.3 %	ACCEPTABLE
189	0.93	14.01	22.25	15.8 %	ACCEPTABLE
190	1.47	13.46	21.66	14.9 %	ACCEPTABLE
191	0.75	14.75	22.51	16.5 %	ACCEPTABLE
192	1.30	14.19	21.90	4.2 %	ACCEPTABLE
193	0.93	14.01	22.25	15.8 %	ACCEPTABLE
194	0.73	14.85	22.55	16.6 %	ACCEPTABLE
195	1.29	14.26	21.92	4.2 %	ACCEPTABLE
196	1.70	15.09	22.72	4.1 %	ACCEPTABLE
197	0.93	15.28	22.96	16.6 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
198	1.44	15.19	22.81	4.8 %	ACCEPTABLE
199	1.58	14.59	22.59	15.5 %	ACCEPTABLE
200	1.08	15.52	23.22	16.5 %	ACCEPTABLE
201	1.46	15.11	22.78	4.7 %	ACCEPTABLE
202	1.20	14.99	23.02	16.0 %	ACCEPTABLE
203	1.16	14.63	22.27	4.6 %	ACCEPTABLE
204	0.78	15.04	22.70	16.6 %	ACCEPTABLE
205	1.29	14.95	22.55	4.7 %	ACCEPTABLE
206	0.91	15.37	22.99	5.3 %	ACCEPTABLE
207	1.43	14.35	22.34	15.6 %	ACCEPTABLE
208	0.93	15.28	22.96	16.6 %	ACCEPTABLE
209	1.31	14.88	22.53	4.7 %	ACCEPTABLE
210	1.05	14.75	22.76	16.1 %	ACCEPTABLE
211	1.01	14.40	22.02	4.5 %	ACCEPTABLE
212	0.63	14.80	22.44	16.7 %	ACCEPTABLE
213	1.14	14.71	22.29	4.6 %	ACCEPTABLE
214	0.76	15.13	22.73	5.2 %	ACCEPTABLE
215	1.27	14.12	22.09	15.6 %	ACCEPTABLE
216	0.78	15.04	22.69	16.6 %	ACCEPTABLE
217	1.15	14.64	22.27	4.6 %	ACCEPTABLE
218	0.90	14.51	22.50	16.1 %	ACCEPTABLE
219	0.86	14.17	21.77	4.4 %	ACCEPTABLE
220	0.49	14.56	22.18	16.7 %	ACCEPTABLE
221	1.00	13.59	21.57	15.5 %	ACCEPTABLE
222	0.51	14.46	22.15	16.5 %	ACCEPTABLE
223	0.88	14.08	21.74	16.1 %	ACCEPTABLE
224	0.50	14.51	22.17	16.6 %	ACCEPTABLE
225	0.87	14.13	21.75	4.4 %	ACCEPTABLE
226	0.77	15.09	22.71	5.2 %	ACCEPTABLE
227	1.14	14.68	22.28	4.6 %	ACCEPTABLE



No.	Center		Radius R [m]	Utilization	Verification
	x [m]	z [m]			
228	0.63	14.80	22.44	16.7 %	ACCEPTABLE
229	0.97	14.75	22.34	4.8 %	ACCEPTABLE
230	0.71	15.02	22.63	5.2 %	ACCEPTABLE
231	1.06	14.35	22.20	15.9 %	ACCEPTABLE
232	0.98	14.69	22.32	4.8 %	ACCEPTABLE
233	0.81	14.61	22.48	16.3 %	ACCEPTABLE
234	0.79	14.38	21.99	4.7 %	ACCEPTABLE
235	0.53	14.64	22.27	16.7 %	ACCEPTABLE
236	0.63	14.23	22.12	16.2 %	ACCEPTABLE
237	0.88	13.98	21.85	15.9 %	ACCEPTABLE
238	0.55	14.57	22.24	16.6 %	ACCEPTABLE
239	0.80	14.32	21.97	16.3 %	ACCEPTABLE
240	0.63	14.23	22.12	16.2 %	ACCEPTABLE
241	0.54	14.61	22.26	16.6 %	ACCEPTABLE
242	0.79	14.35	21.98	4.6 %	ACCEPTABLE
243	0.72	14.99	22.62	5.2 %	ACCEPTABLE
244	0.97	14.72	22.33	4.8 %	ACCEPTABLE
245	0.63	14.80	22.44	16.7 %	ACCEPTABLE
246	0.85	14.77	22.38	4.9 %	ACCEPTABLE
247	0.69	14.95	22.57	5.1 %	ACCEPTABLE
248	0.92	14.50	22.28	16.1 %	ACCEPTABLE
249	0.70	14.90	22.55	16.6 %	ACCEPTABLE
250	0.86	14.73	22.36	4.9 %	ACCEPTABLE
251	0.75	14.67	22.47	16.4 %	ACCEPTABLE
252	0.73	14.52	22.14	4.8 %	ACCEPTABLE
253	0.57	14.69	22.33	16.7 %	ACCEPTABLE
254	0.80	14.25	22.04	16.1 %	ACCEPTABLE
255	0.58	14.65	22.31	16.6 %	ACCEPTABLE
256	0.74	14.48	22.12	16.4 %	ACCEPTABLE
257	0.57	14.67	22.32	16.6 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
258	0.74	14.50	22.13	4.8 %	ACCEPTABLE
259	0.86	14.75	22.37	4.9 %	ACCEPTABLE
260	0.63	14.80	22.44	16.7 %	ACCEPTABLE
261	0.78	14.78	22.40	5.0 %	ACCEPTABLE
262	0.82	14.60	22.33	16.3 %	ACCEPTABLE
263	0.67	14.87	22.51	16.6 %	ACCEPTABLE
264	0.79	14.75	22.39	4.9 %	ACCEPTABLE
265	0.71	14.71	22.46	16.5 %	ACCEPTABLE
266	0.70	14.61	22.24	4.9 %	ACCEPTABLE
267	0.59	14.73	22.36	16.7 %	ACCEPTABLE
268	0.63	14.55	22.30	16.5 %	ACCEPTABLE
269	0.74	14.43	22.17	16.3 %	ACCEPTABLE
270	0.59	14.70	22.35	16.6 %	ACCEPTABLE
271	0.71	14.58	22.23	16.5 %	ACCEPTABLE
272	0.63	14.55	22.30	16.5 %	ACCEPTABLE
273	0.59	14.71	22.36	16.7 %	ACCEPTABLE
274	0.70	14.60	22.23	4.9 %	ACCEPTABLE
275	0.67	14.88	22.52	16.7 %	ACCEPTABLE
276	0.78	14.77	22.39	5.0 %	ACCEPTABLE
277	0.63	14.80	22.44	16.7 %	ACCEPTABLE
278	0.73	14.79	22.41	5.0 %	ACCEPTABLE
279	0.65	14.77	22.34	5.0 %	ACCEPTABLE
280	0.63	14.97	22.54	5.2 %	ACCEPTABLE
281	0.71	14.88	22.45	5.1 %	ACCEPTABLE
282	0.66	14.86	22.50	16.6 %	ACCEPTABLE
283	0.76	14.66	22.37	16.4 %	ACCEPTABLE
284	0.66	14.85	22.49	16.7 %	ACCEPTABLE
285	0.73	14.77	22.41	16.5 %	ACCEPTABLE
286	0.68	14.74	22.45	16.5 %	ACCEPTABLE
287	0.68	14.67	22.30	16.5 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
288	0.65	14.78	22.34	5.0 %	ACCEPTABLE
289	0.60	14.75	22.39	16.7 %	ACCEPTABLE
290	0.63	14.63	22.34	16.5 %	ACCEPTABLE
291	0.71	14.55	22.26	16.4 %	ACCEPTABLE
292	0.61	14.73	22.38	16.6 %	ACCEPTABLE
293	0.68	14.66	22.30	16.5 %	ACCEPTABLE
294	0.63	14.63	22.34	16.5 %	ACCEPTABLE
295	0.60	14.74	22.39	16.7 %	ACCEPTABLE
296	0.68	14.67	22.30	16.5 %	ACCEPTABLE
297	0.66	14.86	22.49	16.7 %	ACCEPTABLE
298	0.73	14.78	22.41	5.0 %	ACCEPTABLE
299	0.63	14.80	22.44	16.7 %	ACCEPTABLE
300	0.70	14.79	22.42	5.0 %	ACCEPTABLE
301	0.65	14.78	22.37	5.0 %	ACCEPTABLE
302	0.63	14.91	22.50	5.1 %	ACCEPTABLE
303	0.68	14.85	22.44	5.1 %	ACCEPTABLE
304	0.65	14.84	22.48	16.7 %	ACCEPTABLE
305	0.72	14.71	22.39	16.5 %	ACCEPTABLE
306	0.65	14.83	22.47	16.7 %	ACCEPTABLE
307	0.70	14.78	22.42	16.6 %	ACCEPTABLE
308	0.67	14.76	22.45	16.6 %	ACCEPTABLE
309	0.66	14.72	22.35	16.6 %	ACCEPTABLE
310	0.64	14.79	22.38	5.0 %	ACCEPTABLE
311	0.61	14.77	22.41	16.7 %	ACCEPTABLE
312	0.63	14.69	22.38	16.6 %	ACCEPTABLE
313	0.68	14.63	22.32	16.5 %	ACCEPTABLE
314	0.61	14.76	22.40	16.7 %	ACCEPTABLE
315	0.66	14.70	22.35	16.6 %	ACCEPTABLE
316	0.63	14.69	22.38	16.6 %	ACCEPTABLE
317	0.61	14.76	22.40	16.7 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
318	0.66	14.71	22.35	16.6 %	ACCEPTABLE
319	0.65	14.84	22.48	16.7 %	ACCEPTABLE
320	0.70	14.78	22.42	16.6 %	ACCEPTABLE
321	0.63	14.80	22.44	16.7 %	ACCEPTABLE
322	0.67	14.79	22.43	16.6 %	ACCEPTABLE
323	0.64	14.79	22.40	5.1 %	ACCEPTABLE
324	0.66	14.84	22.44	5.1 %	ACCEPTABLE
325	0.64	14.83	22.46	16.7 %	ACCEPTABLE
326	0.68	14.82	22.45	16.6 %	ACCEPTABLE
327	0.65	14.82	22.42	5.1 %	ACCEPTABLE
328	0.67	14.87	22.46	5.1 %	ACCEPTABLE
329	0.65	14.86	22.49	16.7 %	ACCEPTABLE
330	0.70	14.77	22.43	16.6 %	ACCEPTABLE
331	0.65	14.85	22.49	16.7 %	ACCEPTABLE
332	0.69	14.82	22.44	5.0 %	ACCEPTABLE
333	0.66	14.81	22.47	16.6 %	ACCEPTABLE
334	0.66	14.77	22.40	16.6 %	ACCEPTABLE
335	0.65	14.82	22.42	5.1 %	ACCEPTABLE
336	0.62	14.81	22.44	16.7 %	ACCEPTABLE
337	0.64	14.75	22.42	16.6 %	ACCEPTABLE
338	0.67	14.72	22.38	16.6 %	ACCEPTABLE
339	0.63	14.80	22.44	16.7 %	ACCEPTABLE
340	0.66	14.77	22.40	16.6 %	ACCEPTABLE
341	0.64	14.76	22.42	16.6 %	ACCEPTABLE
342	0.63	14.81	22.44	16.7 %	ACCEPTABLE
343	0.66	14.77	22.40	16.6 %	ACCEPTABLE
344	0.65	14.86	22.49	16.7 %	ACCEPTABLE
345	0.69	14.82	22.45	5.1 %	ACCEPTABLE
346	4.13	15.96	26.00	13.2 %	ACCEPTABLE
347	4.51	14.11	25.39	12.0 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
348	4.82	12.61	24.99	11.1 %	ACCEPTABLE
349	4.13	15.96	26.00	13.2 %	ACCEPTABLE
350	4.13	15.96	26.00	13.2 %	ACCEPTABLE
351	4.24	15.43	25.81	12.9 %	ACCEPTABLE
352	4.50	14.20	25.42	12.0 %	ACCEPTABLE
353	4.13	15.96	26.00	13.2 %	ACCEPTABLE
354	4.13	15.96	26.00	13.2 %	ACCEPTABLE
355	4.15	15.89	25.97	13.2 %	ACCEPTABLE
356	4.33	15.01	25.67	12.6 %	ACCEPTABLE
357	7.70	11.98	22.10	7.7 %	ACCEPTABLE
358	2.47	13.15	23.14	13.2 %	ACCEPTABLE
359	2.55	12.81	23.04	12.9 %	ACCEPTABLE
360	4.13	15.96	26.00	13.2 %	ACCEPTABLE
361	7.69	12.07	22.11	7.7 %	ACCEPTABLE
362	4.13	15.96	26.00	13.2 %	ACCEPTABLE
363	6.69	12.89	23.13	9.2 %	ACCEPTABLE
364	4.12	16.04	26.03	13.3 %	ACCEPTABLE
365	6.69	12.95	23.14	9.2 %	ACCEPTABLE
366	4.23	15.50	25.84	12.9 %	ACCEPTABLE
367	6.65	13.16	23.18	9.3 %	ACCEPTABLE
368	4.93	12.11	24.87	10.7 %	ACCEPTABLE
369	3.00	14.18	24.10	13.3 %	ACCEPTABLE
370	6.73	12.68	23.09	9.1 %	ACCEPTABLE
371	4.11	16.06	26.04	13.3 %	ACCEPTABLE
372	4.14	15.90	25.98	13.2 %	ACCEPTABLE
373	6.63	13.34	23.22	9.5 %	ACCEPTABLE
374	4.91	12.21	24.90	10.8 %	ACCEPTABLE
375	1.89	12.41	22.28	13.5 %	ACCEPTABLE
376	3.02	14.09	24.07	13.3 %	ACCEPTABLE
377	3.03	14.04	24.06	13.2 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
378	2.97	14.31	24.14	13.4 %	ACCEPTABLE
379	1.90	12.41	22.27	13.5 %	ACCEPTABLE
380	1.96	16.58	24.55	15.7 %	ACCEPTABLE
381	4.59	15.65	23.64	2.4 %	ACCEPTABLE
382	2.64	18.20	26.08	15.8 %	ACCEPTABLE
383	5.31	17.21	25.07	2.7 %	ACCEPTABLE
384	3.31	19.93	27.70	5.7 %	ACCEPTABLE
385	5.78	14.51	24.16	10.8 %	ACCEPTABLE
386	3.40	19.49	27.49	15.4 %	ACCEPTABLE
387	5.30	17.28	25.10	2.7 %	ACCEPTABLE
388	4.01	16.55	26.22	13.6 %	ACCEPTABLE
389	3.77	14.68	22.46	2.5 %	ACCEPTABLE
390	1.89	16.88	24.68	16.0 %	ACCEPTABLE
391	4.54	15.94	23.75	2.5 %	ACCEPTABLE
392	2.57	18.53	26.23	5.5 %	ACCEPTABLE
393	5.00	13.38	22.98	10.9 %	ACCEPTABLE
394	2.65	18.14	26.05	15.7 %	ACCEPTABLE
395	4.52	16.04	23.78	2.5 %	ACCEPTABLE
396	3.26	15.32	24.92	13.7 %	ACCEPTABLE
397	3.00	13.52	21.23	2.0 %	ACCEPTABLE
398	1.15	15.60	23.32	16.5 %	ACCEPTABLE
399	3.77	14.69	22.46	2.5 %	ACCEPTABLE
400	1.82	17.16	24.80	5.3 %	ACCEPTABLE
401	4.22	12.29	21.82	11.1 %	ACCEPTABLE
402	3.74	14.83	22.50	2.5 %	ACCEPTABLE
403	2.50	14.13	23.65	13.8 %	ACCEPTABLE
404	2.24	12.40	20.05	1.6 %	ACCEPTABLE
405	0.41	14.37	22.01	16.6 %	ACCEPTABLE
406	3.00	13.49	21.22	2.0 %	ACCEPTABLE
407	1.09	15.84	23.41	5.4 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
408	1.16	15.54	23.30	16.5 %	ACCEPTABLE
409	2.96	13.67	21.27	2.1 %	ACCEPTABLE
410	1.76	12.98	22.43	14.1 %	ACCEPTABLE
411	-0.32	13.18	20.75	7.5 %	ACCEPTABLE
412	-0.15	12.54	20.56	15.9 %	ACCEPTABLE
413	-0.26	12.97	20.69	16.4 %	ACCEPTABLE
414	1.09	15.81	23.40	5.4 %	ACCEPTABLE
415	2.96	13.70	21.28	2.1 %	ACCEPTABLE
416	0.41	14.37	22.01	16.6 %	ACCEPTABLE
417	2.13	13.90	21.49	2.9 %	ACCEPTABLE
418	0.85	15.39	22.96	5.3 %	ACCEPTABLE
419	2.49	12.22	21.04	12.7 %	ACCEPTABLE
420	0.90	15.16	22.87	16.6 %	ACCEPTABLE
421	2.14	13.88	21.49	2.9 %	ACCEPTABLE
422	1.31	13.43	22.27	14.9 %	ACCEPTABLE
423	1.15	12.31	19.87	2.5 %	ACCEPTABLE
424	-0.08	13.58	21.17	7.6 %	ACCEPTABLE
425	0.02	13.19	21.04	16.2 %	ACCEPTABLE
426	1.19	12.13	19.83	2.5 %	ACCEPTABLE
427	-0.04	13.43	21.12	16.5 %	ACCEPTABLE
428	1.16	12.27	19.87	2.5 %	ACCEPTABLE
429	0.86	15.33	22.93	5.3 %	ACCEPTABLE
430	2.12	13.94	21.51	2.9 %	ACCEPTABLE
431	0.41	14.37	22.01	16.6 %	ACCEPTABLE
432	1.55	14.11	21.68	3.9 %	ACCEPTABLE
433	0.69	15.07	22.65	5.2 %	ACCEPTABLE
434	1.82	12.91	21.31	14.2 %	ACCEPTABLE
435	0.74	14.90	22.58	16.6 %	ACCEPTABLE
436	1.89	14.64	22.24	3.7 %	ACCEPTABLE
437	2.16	13.40	21.84	13.8 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
438	1.07	15.44	23.16	16.5 %	ACCEPTABLE
439	1.91	14.55	22.21	3.6 %	ACCEPTABLE
440	1.34	14.26	22.73	15.4 %	ACCEPTABLE
441	1.25	13.48	21.09	3.6 %	ACCEPTABLE
442	0.41	14.37	22.01	16.6 %	ACCEPTABLE
443	0.73	13.05	21.57	15.2 %	ACCEPTABLE
444	1.52	12.29	20.76	14.0 %	ACCEPTABLE
445	0.47	14.11	21.92	16.4 %	ACCEPTABLE
446	1.28	13.33	21.04	3.5 %	ACCEPTABLE
447	0.73	13.06	21.58	15.2 %	ACCEPTABLE
448	0.43	14.26	21.97	16.6 %	ACCEPTABLE
449	1.26	13.43	21.07	3.6 %	ACCEPTABLE
450	1.04	15.55	23.21	5.3 %	ACCEPTABLE
451	1.89	14.62	22.23	3.7 %	ACCEPTABLE
452	0.74	14.90	22.58	16.6 %	ACCEPTABLE
453	1.50	14.75	22.36	4.4 %	ACCEPTABLE
454	0.92	15.39	23.02	5.3 %	ACCEPTABLE
455	1.70	13.89	22.07	14.9 %	ACCEPTABLE
456	0.96	15.26	22.97	16.6 %	ACCEPTABLE
457	1.52	14.66	22.32	4.4 %	ACCEPTABLE
458	1.14	14.47	22.68	15.8 %	ACCEPTABLE
459	1.08	13.95	21.57	4.1 %	ACCEPTABLE
460	0.52	14.55	22.20	16.6 %	ACCEPTABLE
461	0.74	13.65	21.89	15.7 %	ACCEPTABLE
462	1.28	13.11	21.31	14.8 %	ACCEPTABLE
463	0.56	14.39	22.14	16.5 %	ACCEPTABLE
464	1.11	13.83	21.53	15.7 %	ACCEPTABLE
465	0.73	13.65	21.89	15.6 %	ACCEPTABLE
466	0.53	14.48	22.18	16.6 %	ACCEPTABLE
467	1.10	13.90	21.56	4.1 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
468	0.94	15.34	23.00	5.3 %	ACCEPTABLE
469	1.51	14.72	22.34	4.4 %	ACCEPTABLE
470	0.74	14.90	22.58	16.6 %	ACCEPTABLE
471	1.25	14.81	22.43	4.6 %	ACCEPTABLE
472	0.86	15.23	22.88	5.2 %	ACCEPTABLE
473	1.38	14.22	22.23	15.5 %	ACCEPTABLE
474	0.88	15.14	22.84	16.6 %	ACCEPTABLE
475	1.26	14.74	22.41	4.6 %	ACCEPTABLE
476	1.01	14.62	22.65	16.1 %	ACCEPTABLE
477	0.97	14.27	21.90	4.4 %	ACCEPTABLE
478	0.59	14.67	22.33	16.6 %	ACCEPTABLE
479	0.74	14.06	22.11	16.0 %	ACCEPTABLE
480	1.11	13.68	21.71	15.4 %	ACCEPTABLE
481	0.62	14.56	22.29	16.5 %	ACCEPTABLE
482	0.99	14.18	21.87	16.0 %	ACCEPTABLE
483	0.74	14.06	22.12	16.0 %	ACCEPTABLE
484	0.60	14.62	22.31	16.6 %	ACCEPTABLE
485	0.98	14.23	21.89	4.4 %	ACCEPTABLE
486	0.87	15.19	22.86	16.6 %	ACCEPTABLE
487	1.25	14.78	22.42	4.6 %	ACCEPTABLE
488	0.74	14.90	22.58	16.6 %	ACCEPTABLE
489	1.08	14.85	22.48	4.8 %	ACCEPTABLE
490	0.82	15.13	22.78	16.6 %	ACCEPTABLE
491	1.16	15.07	22.68	4.9 %	ACCEPTABLE
492	0.90	15.36	22.98	5.3 %	ACCEPTABLE
493	1.25	14.67	22.53	15.9 %	ACCEPTABLE
494	0.92	15.29	22.95	5.3 %	ACCEPTABLE
495	1.17	15.02	22.66	4.9 %	ACCEPTABLE
496	1.00	14.94	22.82	16.3 %	ACCEPTABLE
497	0.98	14.70	22.32	4.8 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
498	0.72	14.97	22.61	16.6 %	ACCEPTABLE
499	1.06	14.92	22.51	4.8 %	ACCEPTABLE
500	0.80	15.19	22.81	5.2 %	ACCEPTABLE
501	1.15	14.51	22.37	15.9 %	ACCEPTABLE
502	0.82	15.13	22.78	16.6 %	ACCEPTABLE
503	1.07	14.86	22.49	4.8 %	ACCEPTABLE
504	0.90	14.78	22.65	16.3 %	ACCEPTABLE
505	0.88	14.54	22.15	4.7 %	ACCEPTABLE
506	0.62	14.81	22.44	16.7 %	ACCEPTABLE
507	0.96	14.76	22.34	4.8 %	ACCEPTABLE
508	0.71	15.03	22.63	5.2 %	ACCEPTABLE
509	1.05	14.36	22.20	15.9 %	ACCEPTABLE
510	0.97	14.70	22.32	4.8 %	ACCEPTABLE
511	0.80	14.62	22.48	16.3 %	ACCEPTABLE
512	0.78	14.39	21.99	4.6 %	ACCEPTABLE
513	0.53	14.65	22.27	16.7 %	ACCEPTABLE
514	0.87	14.60	22.17	4.7 %	ACCEPTABLE
515	0.96	14.20	22.03	15.9 %	ACCEPTABLE
516	0.63	14.81	22.44	16.7 %	ACCEPTABLE
517	0.88	14.54	22.16	4.7 %	ACCEPTABLE
518	0.69	14.23	21.82	4.6 %	ACCEPTABLE
519	0.43	14.49	22.10	16.7 %	ACCEPTABLE
520	0.77	14.44	22.01	4.7 %	ACCEPTABLE
521	0.51	14.71	22.29	5.1 %	ACCEPTABLE
522	0.86	14.04	21.87	15.9 %	ACCEPTABLE
523	0.53	14.64	22.27	16.7 %	ACCEPTABLE
524	0.78	14.38	21.99	4.7 %	ACCEPTABLE
525	0.61	14.30	22.14	16.3 %	ACCEPTABLE
526	0.58	14.07	21.65	4.5 %	ACCEPTABLE
527	0.33	14.33	21.93	16.7 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
528	0.43	13.93	21.79	16.3 %	ACCEPTABLE
529	0.68	13.68	21.52	15.9 %	ACCEPTABLE
530	0.35	14.27	21.91	16.6 %	ACCEPTABLE
531	0.60	14.01	21.63	16.3 %	ACCEPTABLE
532	0.43	13.93	21.79	16.3 %	ACCEPTABLE
533	0.34	14.30	21.92	16.7 %	ACCEPTABLE
534	0.59	14.05	21.64	4.5 %	ACCEPTABLE
535	0.52	14.68	22.28	5.1 %	ACCEPTABLE
536	0.77	14.41	22.00	4.7 %	ACCEPTABLE
537	0.43	14.49	22.10	16.7 %	ACCEPTABLE
538	0.65	14.46	22.04	4.8 %	ACCEPTABLE
539	0.49	14.63	22.23	5.0 %	ACCEPTABLE
540	0.72	14.19	21.94	16.2 %	ACCEPTABLE
541	0.50	14.59	22.21	16.7 %	ACCEPTABLE
542	0.66	14.42	22.02	4.8 %	ACCEPTABLE
543	0.53	14.21	21.80	4.7 %	ACCEPTABLE
544	0.37	14.38	21.99	16.6 %	ACCEPTABLE
545	0.43	14.12	21.89	16.4 %	ACCEPTABLE
546	0.60	13.95	21.71	16.2 %	ACCEPTABLE
547	0.38	14.34	21.97	16.6 %	ACCEPTABLE
548	0.54	14.17	21.79	16.5 %	ACCEPTABLE
549	0.43	14.12	21.89	16.4 %	ACCEPTABLE
550	0.37	14.36	21.98	16.7 %	ACCEPTABLE
551	0.59	14.33	21.92	4.8 %	ACCEPTABLE
552	0.43	14.50	22.10	5.0 %	ACCEPTABLE
553	0.66	14.06	21.83	16.2 %	ACCEPTABLE
554	0.44	14.46	22.09	16.7 %	ACCEPTABLE
555	0.60	14.29	21.90	4.7 %	ACCEPTABLE
556	0.49	14.23	22.01	16.4 %	ACCEPTABLE
557	0.47	14.08	21.68	4.6 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
558	0.31	14.25	21.86	16.7 %	ACCEPTABLE
559	0.37	13.99	21.77	16.4 %	ACCEPTABLE
560	0.54	13.82	21.59	16.1 %	ACCEPTABLE
561	0.48	14.04	21.67	16.4 %	ACCEPTABLE
562	0.37	13.99	21.77	16.4 %	ACCEPTABLE
563	0.31	14.23	21.86	16.6 %	ACCEPTABLE
564	0.48	14.06	21.68	16.5 %	ACCEPTABLE
565	0.43	14.48	22.10	16.7 %	ACCEPTABLE
566	0.65	14.45	22.04	4.8 %	ACCEPTABLE
567	0.49	14.62	22.22	5.0 %	ACCEPTABLE
568	0.72	14.18	21.94	16.1 %	ACCEPTABLE
569	0.50	14.58	22.21	16.7 %	ACCEPTABLE
570	0.66	14.41	22.02	4.8 %	ACCEPTABLE
571	0.56	14.35	22.12	16.4 %	ACCEPTABLE
572	0.53	14.20	21.80	4.7 %	ACCEPTABLE
573	0.37	14.37	21.98	16.7 %	ACCEPTABLE
574	0.44	14.10	21.89	16.4 %	ACCEPTABLE
575	0.60	13.94	21.71	16.2 %	ACCEPTABLE
576	0.38	14.33	21.97	16.6 %	ACCEPTABLE
577	0.54	14.16	21.79	16.4 %	ACCEPTABLE
578	0.44	14.10	21.89	16.4 %	ACCEPTABLE
579	0.38	14.35	21.97	16.7 %	ACCEPTABLE
580	0.54	14.18	21.79	4.7 %	ACCEPTABLE
581	0.50	14.60	22.21	16.7 %	ACCEPTABLE
582	0.66	14.43	22.03	4.8 %	ACCEPTABLE
583	0.44	14.47	22.09	16.7 %	ACCEPTABLE
584	0.58	14.46	22.06	4.9 %	ACCEPTABLE
585	0.47	14.57	22.18	16.7 %	ACCEPTABLE
586	0.62	14.28	21.99	16.4 %	ACCEPTABLE
587	0.48	14.54	22.17	16.7 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
588	0.59	14.43	22.05	16.5 %	ACCEPTABLE
589	0.52	14.39	22.11	16.5 %	ACCEPTABLE
590	0.50	14.29	21.90	16.6 %	ACCEPTABLE
591	0.39	14.40	22.02	16.7 %	ACCEPTABLE
592	0.44	14.22	21.95	16.5 %	ACCEPTABLE
593	0.54	14.12	21.84	16.4 %	ACCEPTABLE
594	0.40	14.38	22.01	16.6 %	ACCEPTABLE
595	0.51	14.27	21.89	16.5 %	ACCEPTABLE
596	0.44	14.22	21.95	16.5 %	ACCEPTABLE
597	0.40	14.39	22.01	16.6 %	ACCEPTABLE
598	0.50	14.28	21.90	16.6 %	ACCEPTABLE
599	0.48	14.56	22.17	16.7 %	ACCEPTABLE
600	0.58	14.45	22.05	4.9 %	ACCEPTABLE
601	0.44	14.47	22.09	16.7 %	ACCEPTABLE
602	0.53	14.47	22.07	4.9 %	ACCEPTABLE
603	0.46	14.54	22.15	16.7 %	ACCEPTABLE
604	0.56	14.35	22.03	16.5 %	ACCEPTABLE
605	0.46	14.52	22.14	16.7 %	ACCEPTABLE
606	0.53	14.45	22.07	16.5 %	ACCEPTABLE
607	0.49	14.42	22.11	16.5 %	ACCEPTABLE
608	0.48	14.36	21.97	16.6 %	ACCEPTABLE
609	0.41	14.43	22.04	16.7 %	ACCEPTABLE
610	0.44	14.31	22.00	16.6 %	ACCEPTABLE
611	0.51	14.24	21.92	16.5 %	ACCEPTABLE
612	0.41	14.41	22.04	16.7 %	ACCEPTABLE
613	0.48	14.34	21.96	16.6 %	ACCEPTABLE
614	0.44	14.31	22.00	16.6 %	ACCEPTABLE
615	0.41	14.42	22.04	16.6 %	ACCEPTABLE
616	0.48	14.35	21.96	16.6 %	ACCEPTABLE
617	0.46	14.53	22.15	16.7 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
618	0.53	14.46	22.07	16.6 %	ACCEPTABLE
619	0.44	14.47	22.09	16.7 %	ACCEPTABLE
620	0.50	14.47	22.08	16.6 %	ACCEPTABLE
621	0.45	14.46	22.03	4.9 %	ACCEPTABLE
622	0.43	14.59	22.16	5.1 %	ACCEPTABLE
623	0.48	14.53	22.10	5.0 %	ACCEPTABLE
624	0.45	14.52	22.13	16.7 %	ACCEPTABLE
625	0.52	14.51	22.11	4.9 %	ACCEPTABLE
626	0.47	14.50	22.06	4.9 %	ACCEPTABLE
627	0.50	14.57	22.13	5.0 %	ACCEPTABLE
628	0.46	14.56	22.17	16.7 %	ACCEPTABLE
629	0.54	14.43	22.08	16.6 %	ACCEPTABLE
630	0.47	14.55	22.16	16.7 %	ACCEPTABLE
631	0.52	14.50	22.11	16.6 %	ACCEPTABLE
632	0.48	14.48	22.14	16.6 %	ACCEPTABLE
633	0.48	14.44	22.04	4.9 %	ACCEPTABLE
634	0.43	14.49	22.10	16.7 %	ACCEPTABLE
635	0.45	14.41	22.07	16.6 %	ACCEPTABLE
636	0.50	14.36	22.01	16.5 %	ACCEPTABLE
637	0.43	14.48	22.09	16.7 %	ACCEPTABLE
638	0.48	14.42	22.04	16.6 %	ACCEPTABLE
639	0.45	14.41	22.07	16.6 %	ACCEPTABLE
640	0.43	14.48	22.10	16.7 %	ACCEPTABLE
641	0.48	14.43	22.04	16.6 %	ACCEPTABLE
642	0.47	14.56	22.17	16.7 %	ACCEPTABLE
643	0.52	14.51	22.11	4.9 %	ACCEPTABLE
644	0.45	14.52	22.13	16.7 %	ACCEPTABLE
645	0.49	14.51	22.12	16.6 %	ACCEPTABLE
646	0.46	14.51	22.09	5.0 %	ACCEPTABLE
647	0.45	14.60	22.17	5.0 %	ACCEPTABLE



No.	Center		Radius R [m]	Utilization	Verification
	x [m]	z [m]			
648	0.48	14.56	22.13	5.0 %	ACCEPTABLE
649	0.46	14.55	22.16	16.7 %	ACCEPTABLE
650	0.51	14.46	22.10	16.6 %	ACCEPTABLE
651	0.46	14.54	22.15	16.7 %	ACCEPTABLE
652	0.50	14.51	22.11	5.0 %	ACCEPTABLE
653	0.47	14.50	22.14	16.7 %	ACCEPTABLE
654	0.47	14.46	22.07	16.6 %	ACCEPTABLE
655	0.42	14.55	22.13	5.0 %	ACCEPTABLE
656	0.46	14.51	22.09	5.0 %	ACCEPTABLE
657	0.44	14.50	22.11	16.7 %	ACCEPTABLE
658	0.45	14.45	22.09	16.7 %	ACCEPTABLE
659	0.48	14.41	22.05	16.6 %	ACCEPTABLE
660	0.44	14.49	22.11	16.7 %	ACCEPTABLE
661	0.47	14.46	22.07	16.6 %	ACCEPTABLE
662	0.45	14.45	22.09	16.7 %	ACCEPTABLE
663	0.44	14.50	22.11	16.7 %	ACCEPTABLE
664	0.47	14.46	22.07	16.6 %	ACCEPTABLE
665	0.46	14.55	22.16	16.7 %	ACCEPTABLE
666	0.50	14.51	22.12	16.6 %	ACCEPTABLE
667	0.45	14.52	22.13	16.7 %	ACCEPTABLE

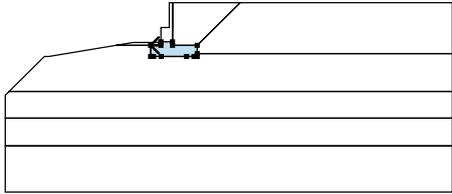
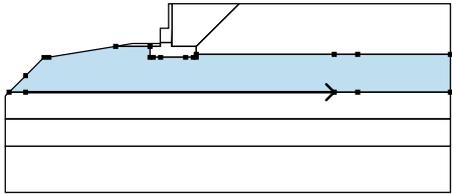
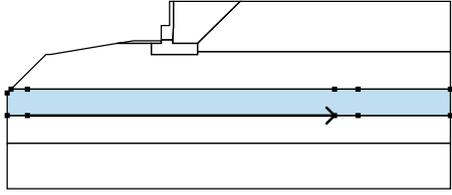


Input data (Stage of construction 2)

Assigning and surfaces

No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
1		-0.40	11.82	-0.40	9.15	Material of structure
		-1.30	9.15	-1.30	7.60	
		-0.05	7.60	0.00	9.10	
		0.00	9.15	0.00	11.82	
2		-0.05	7.20	2.60	7.20	Relleno compactado
		7.22	11.82	0.00	11.82	
		0.00	9.15	0.00	9.10	
		-0.05	7.60			
3		-2.40	7.20	-1.30	7.20	Arenas y limos compacidad suelta
		-1.30	7.50	-4.30	7.50	
		-6.10	7.20			
4		17.46	6.32	20.00	6.32	Relleno compactado
		30.00	6.32	30.00	11.82	
		20.00	11.82	17.46	11.82	
		7.22	11.82	2.60	7.20	
		2.60	6.32			



No.	Surface position	Coordinates of surface points [m]				Assigned soil	
		x	z	x	z		
5		-1.30	7.20	-2.40	7.20	Material of structure	
		-2.40	6.00	-2.06	6.00		
		-1.26	6.00	1.46	6.00		
		2.26	6.00	2.60	6.00		
		2.60	6.32	2.60	7.20		
		-0.05	7.20	-0.05	7.60		
		-1.30	7.60	-1.30	7.50		
6		-15.80	2.22	17.46	2.22	Arenas y limos compacidad suelta	
		20.00	2.22	30.00	2.22		
		30.00	6.32	20.00	6.32		
		17.46	6.32	2.60	6.32		
		2.60	6.00	2.26	6.00		
		1.46	6.00	-1.26	6.00		
		-2.06	6.00	-2.40	6.00		
		-2.40	7.20	-6.10	7.20		
		-13.30	6.00	-13.80	6.00		
-15.80	4.00	-17.58	2.22				
7		-15.80	-0.68	17.46	-0.68	Arenas arcillosas y limos alta plasticidad consistencia media	
		20.00	-0.68	30.00	-0.68		
		30.00	2.22	20.00	2.22		
		17.46	2.22	-15.80	2.22		
		-17.58	2.22	-18.00	1.80		
		-18.00	-0.68				



No.	Surface position	Coordinates of surface points [m]				Assigned soil
		x	z	x	z	
8		-15.80	-3.68	17.46	-3.68	Arenas limosas de compacidad media
		20.00	-3.68	30.00	-3.68	
		30.00	-0.68	20.00	-0.68	
		17.46	-0.68	-15.80	-0.68	
		-18.00	-0.68	-18.00	-3.68	
9		20.00	-3.68	17.46	-3.68	Roca sedimentaria meteorizada
		-15.80	-3.68	-18.00	-3.68	
		-18.00	-8.68	30.00	-8.68	
		30.00	-3.68			

Anti-Slide piles

No.	Anti-Slide pile new	Point		Length l [m]	Construction type	Depth of beam h [m]	Length of beam l _b [m]	Pile spacing	
		x [m]	z [m]					b _f [m]	b/b _b [m]
1	No	-1.66	6.00	13.50	standard wall				2.96
2	No	1.86	6.00	13.50	standard wall				3.94

No.	Cross-section [m]	Pile bearing capacity			
		Distribution along the pile	Max. bearing capacity V _u [kN]	Gradient K [-]	Passive force direction
1	d = 0.80	constant	2400.00		perpendicular to pile
2	d = 0.80	constant	2400.00		perpendicular to pile

Surcharge

No.	Surcharge		Type	Type of action	Location z [m]	Origin x [m]	Length l [m]	Width b [m]	Slope α [°]	Magnitude		
	new	change								q, q ₁ , f, F, x	q ₂ , z	unit
1	No	No	line	permanent	z = 9.15	x = -0.85			-2.30	300.02		kN/m

Surcharges



No.	Name
1	Bridge

Water

Water type : GWT

No.	GWT location	Coordinates of GWT points [m]					
		x	z	x	z	x	z
1		-18.00	4.82	-15.80	4.82	0.00	4.82
		17.46	4.82	20.00	4.82	30.00	4.82

Tensile crack

Tensile crack not input.

Earthquake

Horizontal seismic coefficient : $K_h = 0.3000$

Vertical seismic coefficient : $K_v = 0.2000$

Settings of the stage of construction

Design situation : Service I

Results (Stage of construction 2)

Analysis 1 (stage 2)

Circular slip surface

Slip surface parameters					
Center :	x =	-2.29 [m]	Angles :	$\alpha_1 =$	-18.98 [°]
	z =	47.11 [m]		$\alpha_2 =$	42.30 [°]
Radius :	R =	47.71 [m]			
The slip surface after optimization.					

The forces acting on the pile

Anti-Slide Pile No. 1 (-1.66; 6.00 [m])

The forces acting on the pile cannot be computed - the pile is below the terrain.

Anti-Slide Pile No. 2 (1.86; 6.00 [m])



The forces acting on the pile cannot be computed - the pile is below the terrain.

Slope stability verification (Morgenstern-Price)

Utilization : 66.1 %

CDR CDR: 1.513

Slope stability ACCEPTABLE

Optimization of circular slip surface (Morgenstern-Price)

No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
1	0.45	14.52	22.13	43.6 %	ACCEPTABLE
2	0.45	14.52	22.13	43.6 %	ACCEPTABLE
3	0.45	14.52	22.13	43.6 %	ACCEPTABLE
4	8.02	30.30	28.56	7.8 %	ACCEPTABLE
5	4.17	15.76	25.93	41.0 %	ACCEPTABLE
6	3.71	18.03	26.82	44.7 %	ACCEPTABLE
7	-3.39	52.42	52.43	62.2 %	ACCEPTABLE
8	9.85	16.30	20.45	11.6 %	ACCEPTABLE
9	0.06	35.72	38.16	53.4 %	ACCEPTABLE
10	8.80	24.36	24.46	15.8 %	ACCEPTABLE
11	-7.47	40.63	39.99	39.9 %	ACCEPTABLE
12	-0.69	14.36	21.11	18.2 %	ACCEPTABLE
13	-4.54	29.28	30.34	42.2 %	ACCEPTABLE
14	-3.41	52.50	52.51	62.3 %	ACCEPTABLE
15	9.84	16.33	20.46	11.6 %	ACCEPTABLE
16	0.05	35.73	38.17	53.4 %	ACCEPTABLE
17	8.79	24.37	24.47	15.8 %	ACCEPTABLE
18	-7.47	40.67	40.03	40.0 %	ACCEPTABLE
19	-0.69	14.38	21.12	18.2 %	ACCEPTABLE
20	-4.54	29.31	30.36	42.2 %	ACCEPTABLE
21	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
22	9.84	16.33	20.46	11.6 %	ACCEPTABLE
23	0.05	35.73	38.16	53.4 %	ACCEPTABLE
24	8.79	24.37	24.47	15.8 %	ACCEPTABLE
25	-7.47	40.68	40.04	39.9 %	ACCEPTABLE
26	-0.69	14.39	21.13	18.3 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
27	-4.54	29.32	30.37	42.2 %	ACCEPTABLE
28	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
29	8.48	26.75	26.03	12.7 %	ACCEPTABLE
30	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
31	6.53	28.83	28.82	28.7 %	ACCEPTABLE
32	8.18	16.51	22.12	15.5 %	ACCEPTABLE
33	-1.18	41.70	43.04	50.9 %	ACCEPTABLE
34	6.43	29.61	29.37	27.8 %	ACCEPTABLE
35	2.37	24.48	30.21	31.8 %	ACCEPTABLE
36	3.77	23.21	22.74	8.7 %	ACCEPTABLE
37	0.25	17.74	23.95	24.0 %	ACCEPTABLE
38	5.46	12.49	18.01	6.1 %	ACCEPTABLE
39	4.25	20.14	20.93	11.7 %	ACCEPTABLE
40	0.25	17.74	23.95	24.0 %	ACCEPTABLE
41	3.65	23.93	23.21	7.7 %	ACCEPTABLE
42	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
43	6.13	31.84	31.00	25.2 %	ACCEPTABLE
44	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
45	4.65	34.77	34.05	31.9 %	ACCEPTABLE
46	6.31	22.34	25.74	31.0 %	ACCEPTABLE
47	4.83	33.39	33.00	33.6 %	ACCEPTABLE
48	1.15	30.42	34.16	50.4 %	ACCEPTABLE
49	2.92	29.63	28.82	21.6 %	ACCEPTABLE
50	-19.87	111.83	109.85	17.6 %	ACCEPTABLE
51	-0.15	24.71	28.76	37.7 %	ACCEPTABLE
52	4.55	18.67	22.11	22.9 %	ACCEPTABLE
53	3.36	26.63	26.69	25.5 %	ACCEPTABLE
54	-0.15	24.71	28.76	37.7 %	ACCEPTABLE
55	2.99	29.13	28.45	22.2 %	ACCEPTABLE
56	-3.41	52.52	52.53	62.3 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
57	4.59	35.18	34.37	31.5 %	ACCEPTABLE
58	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
59	2.37	40.56	39.73	40.5 %	ACCEPTABLE
60	-0.87	49.52	46.87	17.5 %	ACCEPTABLE
61	-0.43	58.51	55.62	20.9 %	ACCEPTABLE
62	-4.26	56.63	56.28	59.5 %	ACCEPTABLE
63	4.27	28.43	30.46	37.3 %	ACCEPTABLE
64	2.79	37.90	37.55	43.1 %	ACCEPTABLE
65	0.07	35.67	38.12	53.4 %	ACCEPTABLE
66	1.38	36.03	35.24	34.8 %	ACCEPTABLE
67	-11.21	78.96	77.25	32.2 %	ACCEPTABLE
68	-1.71	54.53	51.45	12.8 %	ACCEPTABLE
69	3.20	25.13	27.25	32.1 %	ACCEPTABLE
70	1.92	32.75	32.65	38.2 %	ACCEPTABLE
71	1.58	34.82	34.26	35.9 %	ACCEPTABLE
72	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
73	2.51	39.70	39.02	41.4 %	ACCEPTABLE
74	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
75	0.53	44.75	44.06	47.7 %	ACCEPTABLE
76	-1.72	50.48	48.71	36.2 %	ACCEPTABLE
77	-1.45	56.13	54.22	38.5 %	ACCEPTABLE
78	2.38	34.11	35.34	41.0 %	ACCEPTABLE
79	1.03	41.89	41.61	49.9 %	ACCEPTABLE
80	-0.02	41.10	40.47	44.3 %	ACCEPTABLE
81	-2.30	53.65	51.60	32.0 %	ACCEPTABLE
82	1.75	31.31	32.63	37.7 %	ACCEPTABLE
83	0.54	38.02	37.90	47.0 %	ACCEPTABLE
84	0.22	39.74	39.32	45.5 %	ACCEPTABLE
85	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
86	0.75	43.51	42.99	48.7 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
87	-3.41	52.52	52.53	62.3 %	ACCEPTABLE
88	-0.75	47.46	46.94	52.1 %	ACCEPTABLE
89	-2.28	51.14	49.97	45.4 %	ACCEPTABLE
90	-2.11	54.79	53.52	46.7 %	ACCEPTABLE
91	-3.80	54.41	54.25	61.0 %	ACCEPTABLE
92	0.83	38.92	39.67	48.6 %	ACCEPTABLE
93	-3.00	50.53	50.74	63.7 %	ACCEPTABLE
94	-0.44	45.73	45.44	53.7 %	ACCEPTABLE
95	-1.90	49.13	48.16	47.0 %	ACCEPTABLE
96	-1.70	52.57	51.50	48.3 %	ACCEPTABLE
97	1.04	37.73	38.71	44.2 %	ACCEPTABLE
98	-0.01	43.45	43.46	55.2 %	ACCEPTABLE
99	-0.76	43.13	42.89	51.6 %	ACCEPTABLE
100	-2.26	51.01	49.85	45.5 %	ACCEPTABLE
101	-3.55	49.04	49.15	60.8 %	ACCEPTABLE
102	0.67	35.58	36.63	41.7 %	ACCEPTABLE
103	-0.31	40.76	40.88	53.7 %	ACCEPTABLE
104	-3.18	47.30	47.60	62.0 %	ACCEPTABLE
105	-0.55	42.02	41.94	52.6 %	ACCEPTABLE
106	-2.99	50.51	50.72	63.6 %	ACCEPTABLE
107	-0.24	44.67	44.51	54.4 %	ACCEPTABLE
108	-2.99	50.51	50.72	63.6 %	ACCEPTABLE
109	-1.28	47.39	47.23	56.8 %	ACCEPTABLE
110	-2.27	49.59	49.02	53.4 %	ACCEPTABLE
111	-2.14	51.84	51.20	53.8 %	ACCEPTABLE
112	-0.12	41.35	42.04	61.0 %	ACCEPTABLE
113	-0.94	45.60	45.67	58.1 %	ACCEPTABLE
114	-1.47	45.52	45.41	56.3 %	ACCEPTABLE
115	-4.61	55.47	55.08	57.8 %	ACCEPTABLE
116	-2.51	50.82	50.12	52.5 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
117	-3.37	49.53	49.68	61.8 %	ACCEPTABLE
118	-0.34	39.73	40.47	52.7 %	ACCEPTABLE
119	-1.12	43.70	43.84	57.8 %	ACCEPTABLE
120	-1.30	44.64	44.65	57.1 %	ACCEPTABLE
121	-2.99	50.51	50.72	63.6 %	ACCEPTABLE
122	-1.12	46.52	46.48	57.6 %	ACCEPTABLE
123	-2.99	50.51	50.72	63.6 %	ACCEPTABLE
124	-1.85	48.46	48.42	58.8 %	ACCEPTABLE
125	-2.51	49.90	49.59	56.8 %	ACCEPTABLE
126	-2.43	51.38	51.02	56.6 %	ACCEPTABLE
127	-0.99	44.08	44.60	61.9 %	ACCEPTABLE
128	-1.59	47.14	47.26	59.6 %	ACCEPTABLE
129	-1.96	47.15	47.14	58.7 %	ACCEPTABLE
130	-4.04	53.70	53.50	59.8 %	ACCEPTABLE
131	-2.67	50.72	50.32	56.2 %	ACCEPTABLE
132	-3.24	49.86	50.03	62.4 %	ACCEPTABLE
133	-2.26	45.16	45.87	57.8 %	ACCEPTABLE
134	-1.12	42.90	43.45	61.9 %	ACCEPTABLE
135	-2.91	48.27	48.61	63.5 %	ACCEPTABLE
136	-1.70	45.83	45.98	59.6 %	ACCEPTABLE
137	-2.26	45.16	45.87	57.8 %	ACCEPTABLE
138	-1.83	46.50	46.57	59.3 %	ACCEPTABLE
139	-2.99	50.51	50.72	63.6 %	ACCEPTABLE
140	-1.72	47.81	47.85	59.3 %	ACCEPTABLE
141	-2.99	50.51	50.72	63.6 %	ACCEPTABLE
142	-2.23	49.16	49.20	60.7 %	ACCEPTABLE
143	-2.62	51.08	50.92	59.5 %	ACCEPTABLE
144	-1.62	46.07	46.48	63.1 %	ACCEPTABLE
145	-2.05	48.22	48.37	61.5 %	ACCEPTABLE
146	-2.78	50.65	50.45	58.5 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
147	-3.16	50.08	50.26	62.6 %	ACCEPTABLE
148	-2.49	46.84	47.38	64.9 %	ACCEPTABLE
149	-1.69	46.45	46.80	62.6 %	ACCEPTABLE
150	-3.00	50.52	50.73	63.6 %	ACCEPTABLE
151	-2.04	48.21	48.35	61.4 %	ACCEPTABLE
152	-1.13	43.67	44.40	56.0 %	ACCEPTABLE
153	-2.33	47.27	47.84	65.9 %	ACCEPTABLE
154	-1.61	46.04	46.45	63.0 %	ACCEPTABLE
155	-1.95	47.76	47.96	61.8 %	ACCEPTABLE
156	-1.06	43.31	44.09	53.2 %	ACCEPTABLE
157	-1.44	45.23	45.75	63.6 %	ACCEPTABLE
158	-2.11	47.31	47.48	60.8 %	ACCEPTABLE
159	-2.49	46.84	47.39	65.1 %	ACCEPTABLE
160	-1.90	43.98	44.89	52.5 %	ACCEPTABLE
161	-1.52	44.39	44.92	62.9 %	ACCEPTABLE
162	-1.90	43.98	44.89	52.5 %	ACCEPTABLE
163	-1.61	44.80	45.28	62.6 %	ACCEPTABLE
164	-2.33	47.28	47.85	65.9 %	ACCEPTABLE
165	-1.61	46.05	46.45	62.9 %	ACCEPTABLE
166	-1.95	47.76	47.96	61.8 %	ACCEPTABLE
167	-1.06	43.31	44.09	53.2 %	ACCEPTABLE
168	-1.44	45.24	45.75	63.5 %	ACCEPTABLE
169	-2.11	47.32	47.49	60.8 %	ACCEPTABLE
170	-2.49	46.85	47.39	64.9 %	ACCEPTABLE
171	-1.90	43.99	44.90	52.5 %	ACCEPTABLE
172	-1.52	44.39	44.93	63.0 %	ACCEPTABLE
173	-1.90	43.99	44.90	52.5 %	ACCEPTABLE
174	-1.61	44.81	45.29	62.6 %	ACCEPTABLE
175	-2.33	47.28	47.85	65.9 %	ACCEPTABLE
176	-2.33	47.28	47.85	65.9 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
177	-1.85	46.46	46.92	63.7 %	ACCEPTABLE
178	-2.70	49.07	49.44	64.6 %	ACCEPTABLE
179	-2.08	47.60	47.92	62.9 %	ACCEPTABLE
180	-1.47	44.57	45.28	59.7 %	ACCEPTABLE
181	-1.73	45.90	46.43	64.1 %	ACCEPTABLE
182	-1.98	45.61	46.39	56.6 %	ACCEPTABLE
183	-1.90	45.89	46.37	63.5 %	ACCEPTABLE
184	-2.74	48.45	48.83	64.2 %	ACCEPTABLE
185	-2.19	47.31	47.61	62.3 %	ACCEPTABLE
186	-2.44	47.00	47.55	65.3 %	ACCEPTABLE
187	-1.52	44.03	44.75	56.8 %	ACCEPTABLE
188	-1.84	45.61	46.12	63.5 %	ACCEPTABLE
189	-2.33	47.28	47.85	65.9 %	ACCEPTABLE
190	-1.79	46.18	46.68	64.0 %	ACCEPTABLE
191	-2.33	47.28	47.85	65.9 %	ACCEPTABLE
192	-2.19	47.09	47.51	63.7 %	ACCEPTABLE
193	-2.16	47.49	47.90	63.8 %	ACCEPTABLE
194	-2.29	47.08	47.67	65.9 %	ACCEPTABLE
195	-2.12	47.31	47.73	63.8 %	ACCEPTABLE
196	-2.34	47.32	47.88	65.8 %	ACCEPTABLE
197	-1.89	46.18	46.74	64.7 %	ACCEPTABLE
198	-2.00	46.16	46.68	64.2 %	ACCEPTABLE
199	-2.19	47.10	47.51	63.6 %	ACCEPTABLE
200	-2.37	46.90	47.48	65.6 %	ACCEPTABLE
201	-2.09	45.58	46.32	57.7 %	ACCEPTABLE
202	-1.92	45.77	46.35	64.6 %	ACCEPTABLE
203	-2.10	45.60	46.34	57.6 %	ACCEPTABLE
204	-1.96	45.97	46.52	64.4 %	ACCEPTABLE
205	-2.29	47.11	47.71	66.1 %	ACCEPTABLE
206	-2.12	47.28	47.71	63.9 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
207	-2.32	47.24	47.82	65.9 %	ACCEPTABLE
208	-1.89	46.15	46.72	64.7 %	ACCEPTABLE
209	-2.00	46.19	46.72	64.4 %	ACCEPTABLE
210	-2.19	47.13	47.55	63.8 %	ACCEPTABLE
211	-2.35	46.89	47.48	65.6 %	ACCEPTABLE
212	-2.08	45.59	46.33	57.6 %	ACCEPTABLE
213	-1.92	45.80	46.39	64.8 %	ACCEPTABLE
214	-2.08	45.59	46.33	57.6 %	ACCEPTABLE
215	-1.96	46.00	46.56	64.6 %	ACCEPTABLE
216	-1.93	46.34	46.89	64.7 %	ACCEPTABLE
217	-2.18	47.21	47.70	64.7 %	ACCEPTABLE
218	-2.31	47.18	47.76	65.9 %	ACCEPTABLE
219	-1.90	45.84	46.50	65.7 %	ACCEPTABLE
220	-2.23	47.12	47.60	64.5 %	ACCEPTABLE
221	-2.32	46.96	47.54	65.7 %	ACCEPTABLE
222	-1.92	45.63	46.30	65.6 %	ACCEPTABLE
223	-2.22	47.16	47.69	65.2 %	ACCEPTABLE
224	-2.30	47.13	47.72	66.0 %	ACCEPTABLE
225	-2.25	47.12	47.64	65.1 %	ACCEPTABLE
226	-2.31	47.00	47.59	65.8 %	ACCEPTABLE
227	-2.35	47.38	47.94	65.8 %	ACCEPTABLE
228	-2.24	47.13	47.68	65.4 %	ACCEPTABLE
229	-2.29	47.10	47.69	65.9 %	ACCEPTABLE
230	-2.36	47.31	47.87	65.7 %	ACCEPTABLE
231	-2.26	47.11	47.66	65.5 %	ACCEPTABLE
232	-2.30	47.03	47.62	65.9 %	ACCEPTABLE
233	-2.33	47.27	47.84	65.9 %	ACCEPTABLE
234	-2.26	47.11	47.68	65.7 %	ACCEPTABLE
235	-2.29	47.08	47.68	66.1 %	ACCEPTABLE
236	-2.33	47.23	47.80	65.9 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
237	-2.27	47.11	47.68	65.7 %	ACCEPTABLE
238	10.04	14.82	19.99	9.5 %	ACCEPTABLE
239	-10.41	86.46	84.78	39.6 %	ACCEPTABLE
240	8.75	24.67	24.66	15.4 %	ACCEPTABLE
241	10.31	12.80	19.52	8.1 %	ACCEPTABLE
242	7.72	32.54	30.27	4.7 %	ACCEPTABLE
243	2.72	22.80	29.22	30.0 %	ACCEPTABLE
244	-0.47	13.55	20.82	17.2 %	ACCEPTABLE
245	-0.48	13.56	20.82	17.2 %	ACCEPTABLE
246	-10.42	86.51	84.84	39.8 %	ACCEPTABLE
247	8.75	24.69	24.68	15.5 %	ACCEPTABLE
248	10.30	12.80	19.52	8.0 %	ACCEPTABLE
249	7.72	32.51	30.25	4.8 %	ACCEPTABLE
250	2.73	22.78	29.21	30.0 %	ACCEPTABLE
251	-0.46	13.56	20.84	17.3 %	ACCEPTABLE
252	-0.46	13.56	20.84	17.3 %	ACCEPTABLE
253	4.60	43.30	40.32	9.2 %	ACCEPTABLE
254	-17.81	122.34	120.34	28.7 %	ACCEPTABLE
255	7.60	20.84	23.97	25.3 %	ACCEPTABLE
256	4.98	40.41	37.86	12.7 %	ACCEPTABLE
257	4.93	15.88	18.98	10.7 %	ACCEPTABLE
258	-4.15	36.26	36.88	55.5 %	ACCEPTABLE
259	7.43	22.10	24.62	25.5 %	ACCEPTABLE
260	8.45	14.47	21.51	13.7 %	ACCEPTABLE
261	6.57	28.57	28.64	29.0 %	ACCEPTABLE
262	6.62	28.13	28.34	29.5 %	ACCEPTABLE
263	-4.15	36.26	36.88	55.5 %	ACCEPTABLE
264	4.45	27.43	28.00	33.1 %	ACCEPTABLE
265	5.68	18.71	23.07	19.9 %	ACCEPTABLE
266	4.24	28.98	29.07	31.4 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
267	0.85	20.07	20.15	4.6 %	ACCEPTABLE
268	-5.92	31.94	32.21	44.6 %	ACCEPTABLE
269	2.12	12.96	17.16	5.0 %	ACCEPTABLE
270	-3.62	23.28	25.57	36.1 %	ACCEPTABLE
271	1.16	18.33	19.21	5.4 %	ACCEPTABLE
272	0.84	20.14	20.19	4.5 %	ACCEPTABLE
273	4.18	29.34	29.33	31.1 %	ACCEPTABLE
274	-4.15	36.26	36.88	55.5 %	ACCEPTABLE
275	1.74	31.41	31.41	36.8 %	ACCEPTABLE
276	-1.94	32.62	30.71	9.4 %	ACCEPTABLE
277	-10.45	72.87	71.25	33.9 %	ACCEPTABLE
278	-0.70	45.77	43.37	18.3 %	ACCEPTABLE
279	-4.13	44.50	44.65	57.2 %	ACCEPTABLE
280	2.29	38.39	37.75	40.2 %	ACCEPTABLE
281	-1.70	40.96	38.51	11.5 %	ACCEPTABLE
282	-12.96	95.85	93.97	33.0 %	ACCEPTABLE
283	-0.70	57.22	54.32	19.5 %	ACCEPTABLE
284	4.06	27.24	29.42	36.2 %	ACCEPTABLE
285	2.52	36.95	36.59	41.7 %	ACCEPTABLE
286	0.24	30.32	29.70	27.1 %	ACCEPTABLE
287	-2.48	45.23	42.31	6.5 %	ACCEPTABLE
288	1.89	21.27	23.56	25.5 %	ACCEPTABLE
289	0.74	27.56	27.65	30.4 %	ACCEPTABLE
290	0.41	29.36	28.98	28.4 %	ACCEPTABLE
291	-3.68	51.54	51.51	60.8 %	ACCEPTABLE
292	2.33	40.84	39.96	40.2 %	ACCEPTABLE
293	-1.14	48.44	45.76	15.5 %	ACCEPTABLE
294	-0.61	59.64	56.67	20.1 %	ACCEPTABLE
295	4.24	28.61	30.58	37.1 %	ACCEPTABLE
296	-2.65	48.83	49.22	64.8 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
297	2.77	38.02	37.64	42.9 %	ACCEPTABLE
298	-0.24	45.69	43.45	21.4 %	ACCEPTABLE
299	0.31	53.73	51.24	25.0 %	ACCEPTABLE
300	4.48	27.08	29.57	37.8 %	ACCEPTABLE
301	3.12	35.78	35.86	45.1 %	ACCEPTABLE
302	0.45	33.80	36.66	54.1 %	ACCEPTABLE
303	1.74	33.83	33.48	37.0 %	ACCEPTABLE
304	-0.94	49.90	47.22	17.1 %	ACCEPTABLE
305	-3.88	45.52	45.69	58.5 %	ACCEPTABLE
306	3.39	23.95	26.52	32.6 %	ACCEPTABLE
307	2.22	30.97	31.30	39.8 %	ACCEPTABLE
308	1.91	32.82	32.70	38.0 %	ACCEPTABLE
309	-2.65	48.83	49.22	64.8 %	ACCEPTABLE
310	2.87	37.35	37.11	43.7 %	ACCEPTABLE
311	-2.65	48.83	49.22	64.8 %	ACCEPTABLE
312	1.04	41.82	41.56	50.1 %	ACCEPTABLE
313	-1.04	46.72	45.35	39.5 %	ACCEPTABLE
314	-0.69	51.81	50.29	41.9 %	ACCEPTABLE
315	2.69	32.33	33.99	41.7 %	ACCEPTABLE
316	1.46	39.38	39.53	52.1 %	ACCEPTABLE
317	-0.37	37.79	39.81	52.5 %	ACCEPTABLE
318	0.45	38.46	38.26	46.6 %	ACCEPTABLE
319	-6.53	60.88	59.95	51.3 %	ACCEPTABLE
320	-1.53	49.40	47.75	37.4 %	ACCEPTABLE
321	-3.47	46.63	46.87	60.9 %	ACCEPTABLE
322	2.04	29.69	31.45	38.7 %	ACCEPTABLE
323	0.94	35.80	36.09	48.9 %	ACCEPTABLE
324	0.66	37.31	37.31	47.6 %	ACCEPTABLE
325	-2.65	48.83	49.22	64.8 %	ACCEPTABLE
326	1.22	40.79	40.69	50.8 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
327	-2.65	48.83	49.22	64.8 %	ACCEPTABLE
328	-0.16	44.27	44.17	54.7 %	ACCEPTABLE
329	-1.58	47.42	46.63	48.2 %	ACCEPTABLE
330	-1.35	50.71	49.83	49.7 %	ACCEPTABLE
331	1.23	36.71	37.89	44.2 %	ACCEPTABLE
332	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
333	0.11	42.79	42.90	55.8 %	ACCEPTABLE
334	-1.26	45.70	45.12	49.8 %	ACCEPTABLE
335	-1.01	48.84	48.17	51.3 %	ACCEPTABLE
336	1.43	35.66	37.06	44.7 %	ACCEPTABLE
337	-1.97	45.53	46.32	56.1 %	ACCEPTABLE
338	0.47	40.82	41.24	57.4 %	ACCEPTABLE
339	-0.24	40.38	40.55	53.9 %	ACCEPTABLE
340	-1.56	47.31	46.54	48.5 %	ACCEPTABLE
341	-2.84	45.67	46.16	63.1 %	ACCEPTABLE
342	1.04	33.64	35.11	42.5 %	ACCEPTABLE
343	0.15	38.33	38.85	55.6 %	ACCEPTABLE
344	-2.53	44.18	44.86	64.2 %	ACCEPTABLE
345	-0.06	39.42	39.75	54.7 %	ACCEPTABLE
346	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
347	0.28	41.88	42.13	56.5 %	ACCEPTABLE
348	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
349	-0.68	44.29	44.54	59.1 %	ACCEPTABLE
350	-1.60	46.17	45.98	55.9 %	ACCEPTABLE
351	-1.44	48.23	47.98	56.3 %	ACCEPTABLE
352	0.34	38.94	40.04	45.9 %	ACCEPTABLE
353	-0.39	42.75	43.22	60.2 %	ACCEPTABLE
354	-0.90	42.56	42.85	58.5 %	ACCEPTABLE
355	-3.75	51.34	51.30	60.4 %	ACCEPTABLE
356	-1.81	47.23	46.91	55.0 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
357	-2.66	46.15	46.68	64.2 %	ACCEPTABLE
358	0.11	37.42	38.57	45.2 %	ACCEPTABLE
359	-0.59	40.99	41.52	59.8 %	ACCEPTABLE
360	-0.75	41.80	42.21	59.2 %	ACCEPTABLE
361	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
362	-0.54	43.55	43.90	59.7 %	ACCEPTABLE
363	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
364	-1.22	45.26	45.61	61.0 %	ACCEPTABLE
365	-1.84	46.49	46.56	59.3 %	ACCEPTABLE
366	-1.73	47.85	47.88	59.2 %	ACCEPTABLE
367	-0.46	41.40	42.32	47.2 %	ACCEPTABLE
368	-1.00	44.13	44.64	61.8 %	ACCEPTABLE
369	-1.35	44.05	44.43	60.9 %	ACCEPTABLE
370	-3.24	49.83	50.00	62.4 %	ACCEPTABLE
371	-1.97	47.19	47.17	58.6 %	ACCEPTABLE
372	-2.54	46.47	47.02	64.8 %	ACCEPTABLE
373	-1.68	42.34	43.44	50.0 %	ACCEPTABLE
374	-0.60	40.29	41.25	47.1 %	ACCEPTABLE
375	-2.25	45.10	45.82	57.6 %	ACCEPTABLE
376	-1.12	42.90	43.45	61.9 %	ACCEPTABLE
377	-1.68	42.34	43.44	50.0 %	ACCEPTABLE
378	-1.24	43.49	43.95	61.4 %	ACCEPTABLE
379	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
380	-1.11	44.71	45.13	61.3 %	ACCEPTABLE
381	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
382	-1.92	47.60	47.82	61.9 %	ACCEPTABLE
383	-1.03	43.18	43.98	52.8 %	ACCEPTABLE
384	-1.42	45.09	45.62	63.7 %	ACCEPTABLE
385	-1.66	45.06	45.51	62.5 %	ACCEPTABLE
386	-2.08	47.16	47.35	60.9 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
387	-2.46	46.69	47.25	65.1 %	ACCEPTABLE
388	-1.87	43.84	44.77	52.0 %	ACCEPTABLE
389	-1.50	44.25	44.81	63.1 %	ACCEPTABLE
390	-1.87	43.84	44.77	52.0 %	ACCEPTABLE
391	-1.58	44.66	45.16	62.7 %	ACCEPTABLE
392	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
393	-1.50	45.50	45.98	63.4 %	ACCEPTABLE
394	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
395	-1.82	46.31	46.79	63.8 %	ACCEPTABLE
396	-2.66	48.90	49.28	64.7 %	ACCEPTABLE
397	-2.05	47.44	47.78	63.0 %	ACCEPTABLE
398	-2.36	47.42	47.98	65.8 %	ACCEPTABLE
399	-1.44	44.43	45.16	56.1 %	ACCEPTABLE
400	-1.87	45.74	46.24	63.5 %	ACCEPTABLE
401	-2.16	47.15	47.47	62.5 %	ACCEPTABLE
402	-2.41	46.83	47.40	65.3 %	ACCEPTABLE
403	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
404	-1.76	46.04	46.55	64.0 %	ACCEPTABLE
405	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
406	-2.13	47.34	47.76	63.9 %	ACCEPTABLE
407	-2.34	47.32	47.89	65.9 %	ACCEPTABLE
408	-1.90	46.20	46.77	64.8 %	ACCEPTABLE
409	-2.01	46.20	46.72	64.2 %	ACCEPTABLE
410	-2.20	47.14	47.55	63.6 %	ACCEPTABLE
411	-2.37	46.92	47.50	65.6 %	ACCEPTABLE
412	-2.10	45.62	46.36	57.7 %	ACCEPTABLE
413	-1.93	45.81	46.39	64.6 %	ACCEPTABLE
414	-2.10	45.62	46.36	57.7 %	ACCEPTABLE
415	-1.97	46.01	46.56	64.4 %	ACCEPTABLE
416	-2.30	47.12	47.71	66.0 %	ACCEPTABLE



No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
417	-1.94	46.40	46.94	64.6 %	ACCEPTABLE
418	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
419	-2.19	47.27	47.75	64.6 %	ACCEPTABLE
420	-2.32	47.26	47.83	65.9 %	ACCEPTABLE
421	-1.91	45.90	46.55	65.6 %	ACCEPTABLE
422	-2.24	47.13	47.60	64.4 %	ACCEPTABLE
423	-2.34	46.99	47.57	65.7 %	ACCEPTABLE
424	-1.93	45.64	46.30	65.5 %	ACCEPTABLE
425	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
426	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
427	-2.22	47.22	47.74	65.1 %	ACCEPTABLE
428	-2.31	47.21	47.79	65.9 %	ACCEPTABLE
429	-2.26	47.13	47.64	65.0 %	ACCEPTABLE
430	-2.33	47.03	47.61	65.7 %	ACCEPTABLE
431	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
432	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
433	-2.26	47.06	47.61	65.4 %	ACCEPTABLE
434	-2.25	47.19	47.73	65.4 %	ACCEPTABLE
435	-2.31	47.18	47.76	65.9 %	ACCEPTABLE
436	-2.38	47.34	47.89	65.7 %	ACCEPTABLE
437	-2.27	47.12	47.66	65.3 %	ACCEPTABLE
438	-2.32	47.06	47.64	65.8 %	ACCEPTABLE
439	-2.31	47.00	47.59	65.8 %	ACCEPTABLE
440	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
441	-2.30	47.11	47.70	65.9 %	ACCEPTABLE
442	-2.27	47.08	47.64	65.5 %	ACCEPTABLE
443	-2.34	47.35	47.91	65.8 %	ACCEPTABLE
444	-2.27	47.17	47.73	65.6 %	ACCEPTABLE
445	-2.30	47.16	47.75	66.0 %	ACCEPTABLE
446	-2.27	47.12	47.68	65.6 %	ACCEPTABLE

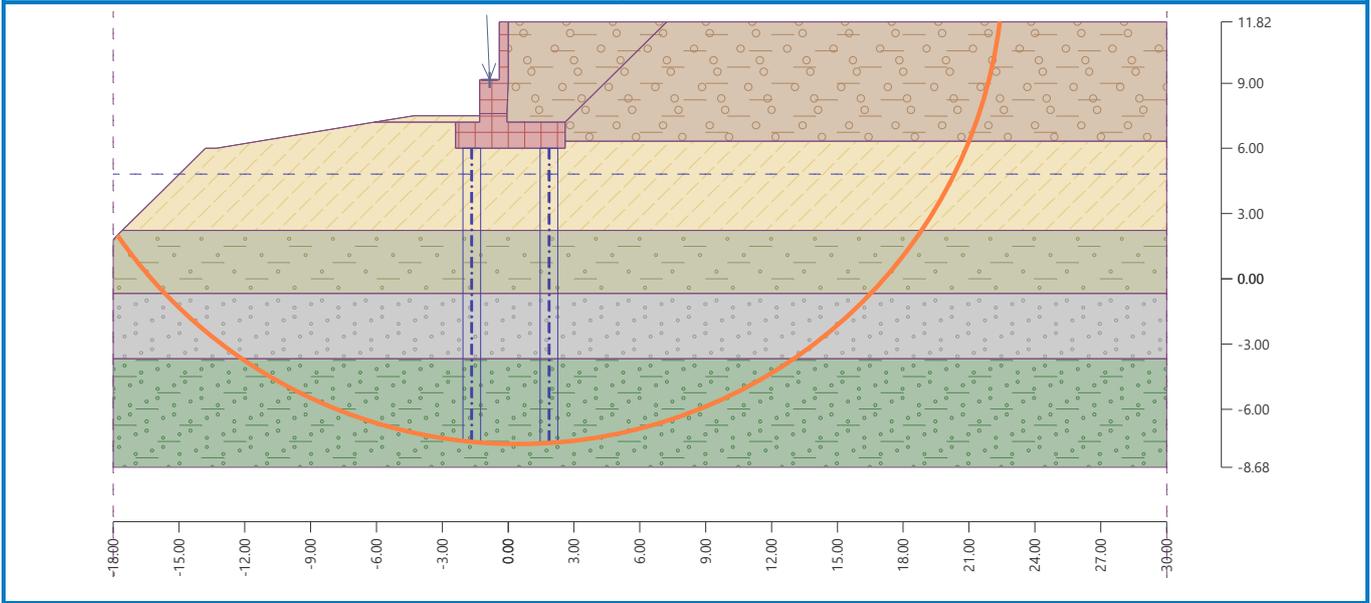


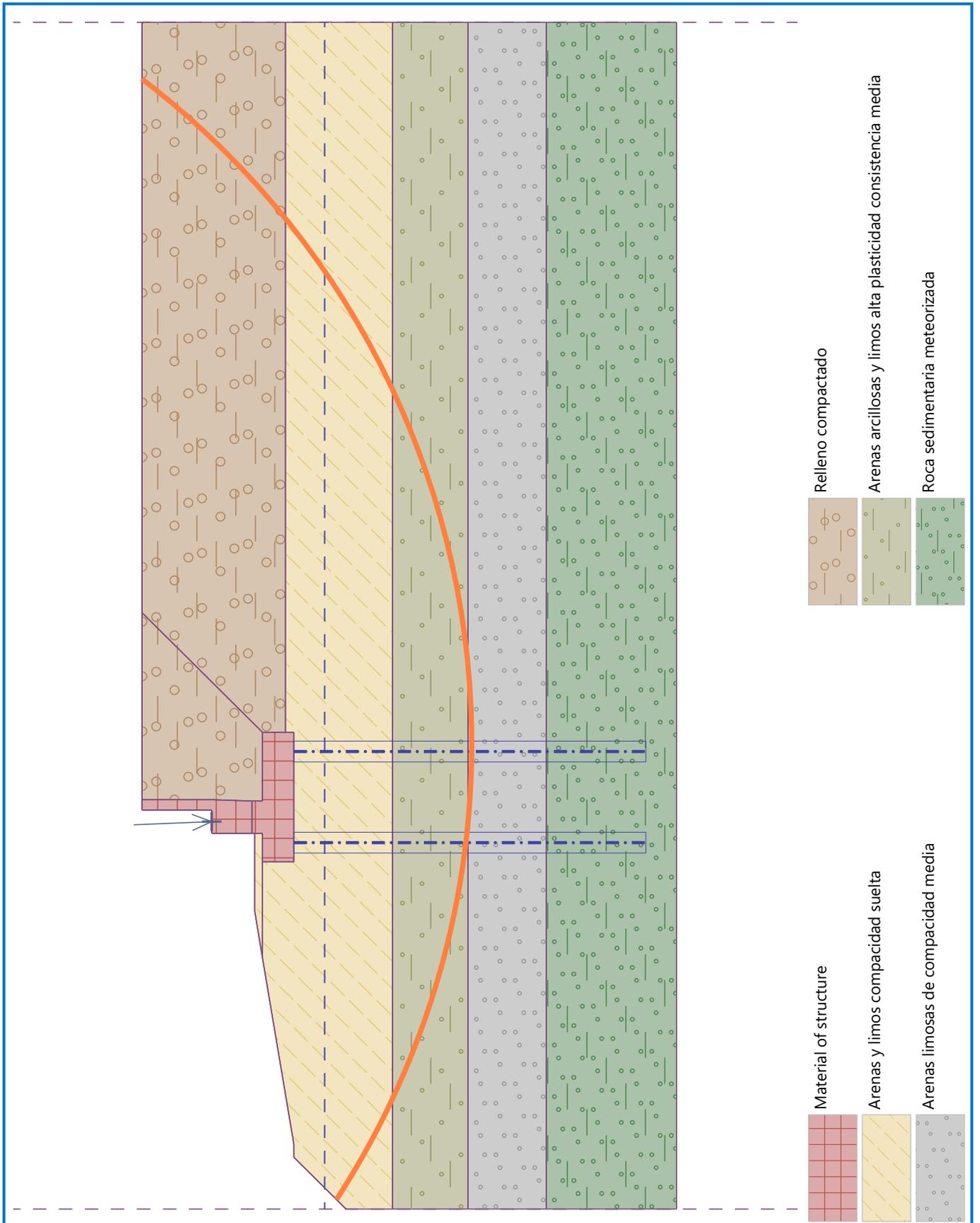
No.	Center		Radius	Utilization	Verification
	x [m]	z [m]	R [m]		
447	-2.34	47.35	47.91	65.8 %	ACCEPTABLE
448	-2.27	47.17	47.73	65.6 %	ACCEPTABLE
449	-2.30	47.16	47.74	65.8 %	ACCEPTABLE
450	-2.29	47.08	47.67	65.9 %	ACCEPTABLE
451	-2.35	47.30	47.86	65.8 %	ACCEPTABLE
452	-2.28	47.16	47.72	65.6 %	ACCEPTABLE
453	-2.31	47.11	47.69	65.8 %	ACCEPTABLE
454	-2.30	47.07	47.66	65.9 %	ACCEPTABLE
455	-2.30	47.12	47.71	66.0 %	ACCEPTABLE
456	-2.29	47.11	47.71	66.1 %	ACCEPTABLE



Name : Analysis

Stage - analysis : 1 - 1







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Estudios y Fiscalización de Obras
Civiles, Vías, Estructuras, Drenes