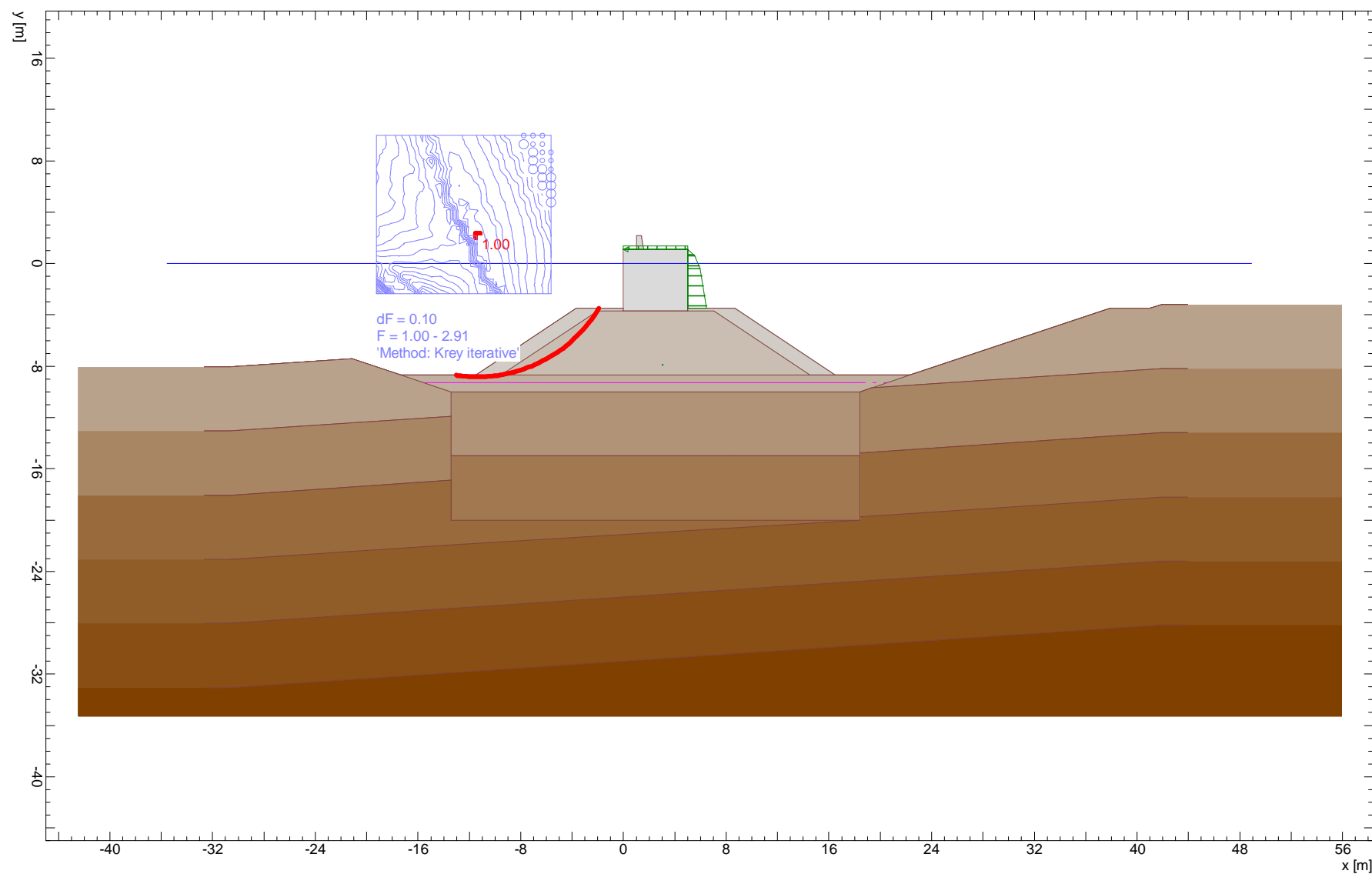


!Global safety / AC 1



Nr.:

ΛΙΜΕΝΙΚΗ ΕΓΚΑΤΑΣΤΑΣΗ ΕΞΥΠΗΡΕΤΗΣΗΣ ΣΚΑΦΩΝ ΣΤΗ ΘΕΣΗ ΨΑΝΗ ΝΑΥΠΑΚΤΟΥ										Page 14
ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Γ-Γ										19.10.23, 17:23
Ρηχός κύκλος αστοχίας										Σεισμικές συνθήκες συνθήκες
Larix-5 - Version 2.05										
GEOTECHNICAL MODEL										
Soil layer boundaries										
Description	φ [°]	Parameters γ [kN/m ³]	c [kN/m ²]	Point	x [m]	y [m]	Polygon points Point	x [m]	y [m]	
Τ.Ο. - Ανωδομή	45.00	23.50	1000.00	1	-30.67	-8.06	2	-21.16	-7.42	
				3	-17.33	-8.70	4	-11.48	-8.70	
				5	-3.68	-3.50	6	0	-3.50	
				7	0	1.10	8	1.00	1.10	
				9	1.00	2.20	10	1.40	2.20	
				11	1.55	1.10	12	5.00	1.10	
				13	5.00	-3.70	14	5.00	-3.50	
				15	8.68	-3.50	16	16.48	-8.70	
				17	22.33	-8.70	18	37.93	-3.50	
				19	41.00	-3.50	20	41.94	-3.19	
Θωράκιση	43.00	18.00	5.00	1	-30.67	-8.06	2	-21.16	-7.42	
				3	-17.33	-8.70	4	-11.48	-8.70	
				5	-3.68	-3.50	6	0	-3.50	
				7	0	-3.70	8	5.00	-3.70	
				9	5.00	-3.50	10	8.68	-3.50	
				11	16.48	-8.70	12	22.33	-8.70	
				13	37.93	-3.50	14	41.00	-3.50	
				15	41.94	-3.19				
Πρίσμα λιθορριπών	43.00	21.00	0	1	-30.67	-8.06	2	-21.16	-7.42	
				3	-17.33	-8.70	4	-11.48	-8.70	
				5	-9.53	-8.70	6	-2.03	-3.70	
				7	0	-3.70	8	5.00	-3.70	
				9	7.03	-3.70	10	14.53	-8.70	
				11	16.48	-8.70	12	22.33	-8.70	
				13	37.93	-3.50	14	41.00	-3.50	
				15	41.94	-3.19				
Εξυγίανση	38.00	21.00	0	1	-30.67	-8.06	2	-21.16	-7.42	
				3	-17.33	-8.70	4	-11.48	-8.70	
				5	-9.53	-8.70	6	14.53	-8.70	
				7	22.33	-8.70	8	37.93	-3.50	
				9	41.00	-3.50	10	41.94	-3.19	
Στρώση Ι (0-5m)	0.00	19.00	2.25	1	-30.67	-8.06	2	-21.16	-7.42	
				3	-17.33	-8.70	4	-13.43	-10.00	
				5	-11.48	-10.00	6	-3.68	-10.00	
				7	8.68	-10.00	8	16.48	-10.00	
				9	18.43	-10.00	10	22.33	-8.70	
				11	37.93	-3.50	12	41.00	-3.50	
				13	41.94	-3.19				
Στρώση Ι + Χαλ (0-5m)	20.00	9.30	14.80	1	-30.67	-13.06	2	-13.43	-11.90	
				3	-13.43	-10.00	4	-11.48	-10.00	
				5	-3.68	-10.00	6	8.68	-10.00	
				7	18.43	-10.00	8	19.31	-9.71	
				9	41.94	-8.19				
Στρώση Ι (5-10m)	0.00	19.00	6.75	1	-30.67	-13.06	2	-13.43	-11.90	

Nr.:

Ρηχός κύκλος αστοχίας

Σεισμικές συνθήκες συνθήκες

Larix-5 - Version 2.05

Description	Parameters			Polygon points						
	ϕ [°]	γ [kN/m ³]	c [kN/m ²]	Point	x [m]	y [m]	Point	x [m]	y [m]	
Στρώση I + Χαλ (5-10m)	16.00	9.30	27.80	3	-13.43	-15.00	4	-3.68	-15.00	
				5	8.68	-15.00	6	18.43	-15.00	
				7	18.43	-14.77	8	18.43	-10.00	
				9	19.31	-9.71	10	41.94	-8.19	
				1	-30.67	-18.06	2	-13.43	-16.90	
Στρώση I (10-15m)	0.00	19.00	34.50	3	-13.43	-15.00	4	-3.68	-15.00	
				5	8.68	-15.00	6	18.43	-15.00	
				7	18.43	-14.77	8	41.94	-13.19	
				1	-30.67	-18.06	2	-13.43	-16.90	
				3	-13.43	-20.00	4	18.43	-20.00	
Στρώση I (15-20m)	0.00	19.00	49.50	5	18.43	-19.77	6	18.43	-16.00	
				7	18.43	-14.77	8	41.94	-13.19	
				1	-30.67	-23.06	2	-13.43	-21.90	
				3	18.43	-20.00	4	18.43	-19.77	
				5	41.94	-18.19				
Στρώση I (20-25m)	0.00	19.00	64.50	1	-30.67	-28.06	2	41.94	-23.19	
Στρώση I (25-30m)	0.00	19.00	79.50	1	-30.67	-33.06	2	41.94	-28.19	

Water table

Water pressure permanent

Parameters			Polygon points									
γ_w [kN/m ³]	State	u	Point	x [m]	y [m]	Point	x [m]	y [m]	Point	x [m]	y [m]	
10.00	active	static	1	-33.53	0	2	46.93	0				

State : Groundwater active or inactive in the analysis

u : Pore pressure calculated hydrodynamically or hydrostatically

Soil reinforcement elements

Parameters		Geometry				
H [kN/m ²]	K _{max} [kN/m]	x ₁ [m]	y ₁ [m]	x ₂ [m]	y ₂ [m]	
25.40	50.00	-15.53	-9.30	20.53	-9.30	

H : Soil reinforcement forces

 K_{max} : Pull-out or breaking force of soil reinforcement element

Nr.:

ΛΙΜΕΝΙΚΗ ΕΓΚΑΤΑΣΤΑΣΗ ΕΞΥΠΗΡΕΤΗΣΗΣ ΣΚΑΦΩΝ ΣΤΗ ΘΕΣΗ ΨΑΝΗ ΝΑΥΠΑΚΤΟΥ										Page 16
ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Γ-Γ										19.10.23, 17:23
Ρηχός κύκλος αστοχίας										Σεισμικές συνθήκες συνθήκες
Larix-5 - Version 2.05										
LOADS										
Distributed load										
Description	Action	x ₁ [m]	y ₁ [m]	x ₂ [m]	y ₂ [m]	p ₁ [kN/m ²]	p ₂ [kN/m ²]	Orientation		
	Live load	0.00	1.10	5.00	1.10	-2.50	-2.50	y		
	accidental	5.00	0.60	5.00	-0.40	-5.60	-9.70	x		
	accidental	5.00	-0.40	5.00	-3.50	-9.70	-14.80	x		
	accidental	5.00	1.10	5.00	0.60	0	-5.60	x		
Line load										
Description	Action	x [m]	y [m]	P _x [kN/m]	P _y [kN/m]					
	Live load	0.00	1.10	-7.50	0					
Earthquake load										
Description	Action	a _x [g]	a _y [g]							
	accidental	-0.13	0.10							
a _x : Horizontal acceleration										
a _y : Vertical acceleration										
CALCULATION OPTIONS										
Options										
Method	δ _T [-]	η _L	Straight extensions of slip circles							
Krey	0.0200	50.000	with		Safety factor determined iteratively					
δ _T : Convergence tolerance of the iteration										
η _L : Number of slices										
										Nr.:

Ρηχός κύκλος αστοχίας

Σεισμικές συνθήκες συνθήκες

Larix-5 - Version 2.05

LIMIT VALUES

Slip circle with minimum safety

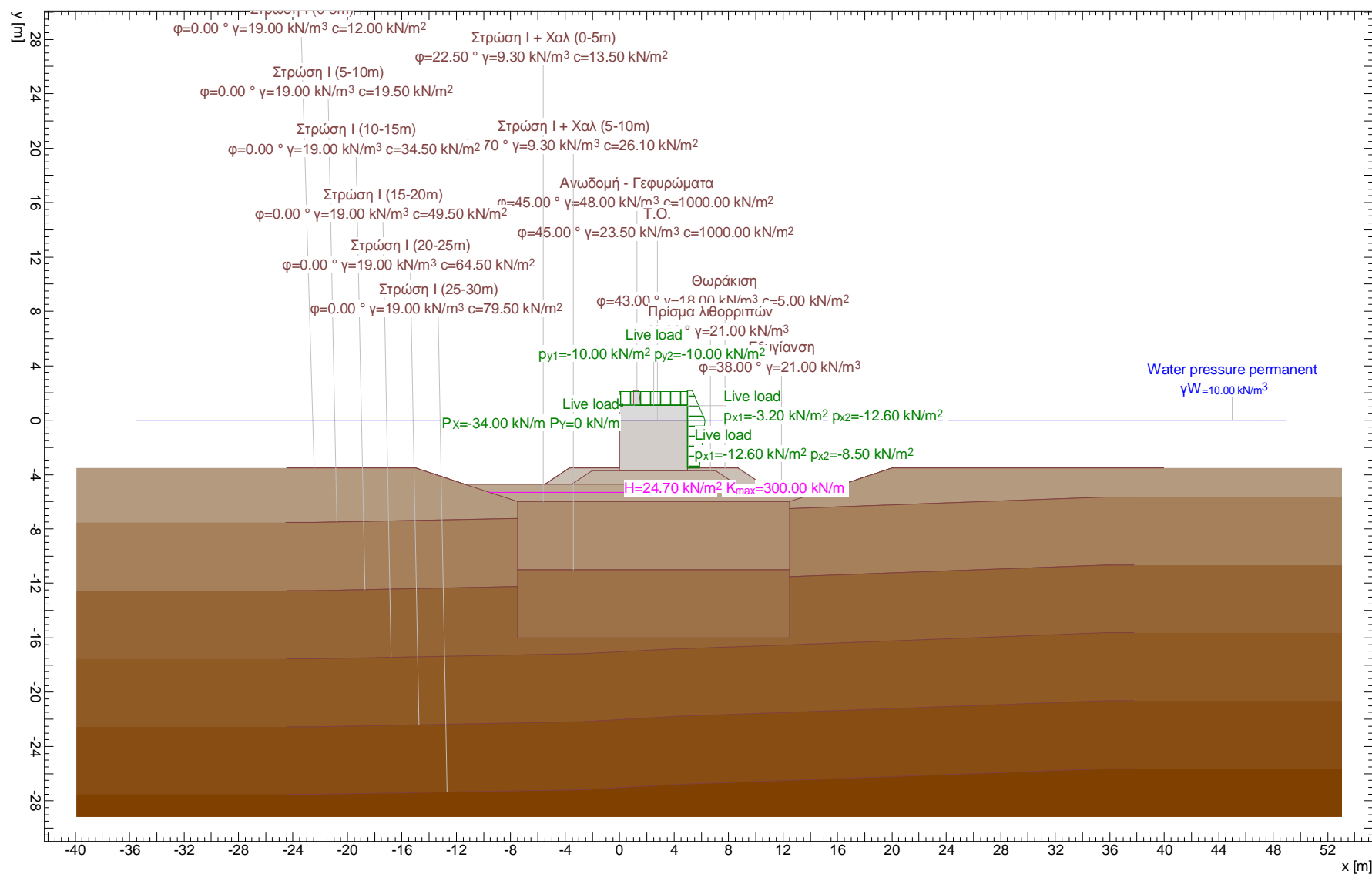
Circle No.	x [m]	y [m]	R [m]	point of constraint	Anchor	F _{ex} [-]	L _{req} [m]	L _{min} [m]	Remark see footnotes	
1512	-11.36	2.20	11.03	2		1.00				

F_{ex} : existing safety, required safety F_{req} = 1.00
L_{req} : calculated required free anchor length between L_{min} - L_{max}
L_{min} : input minimum free anchor length

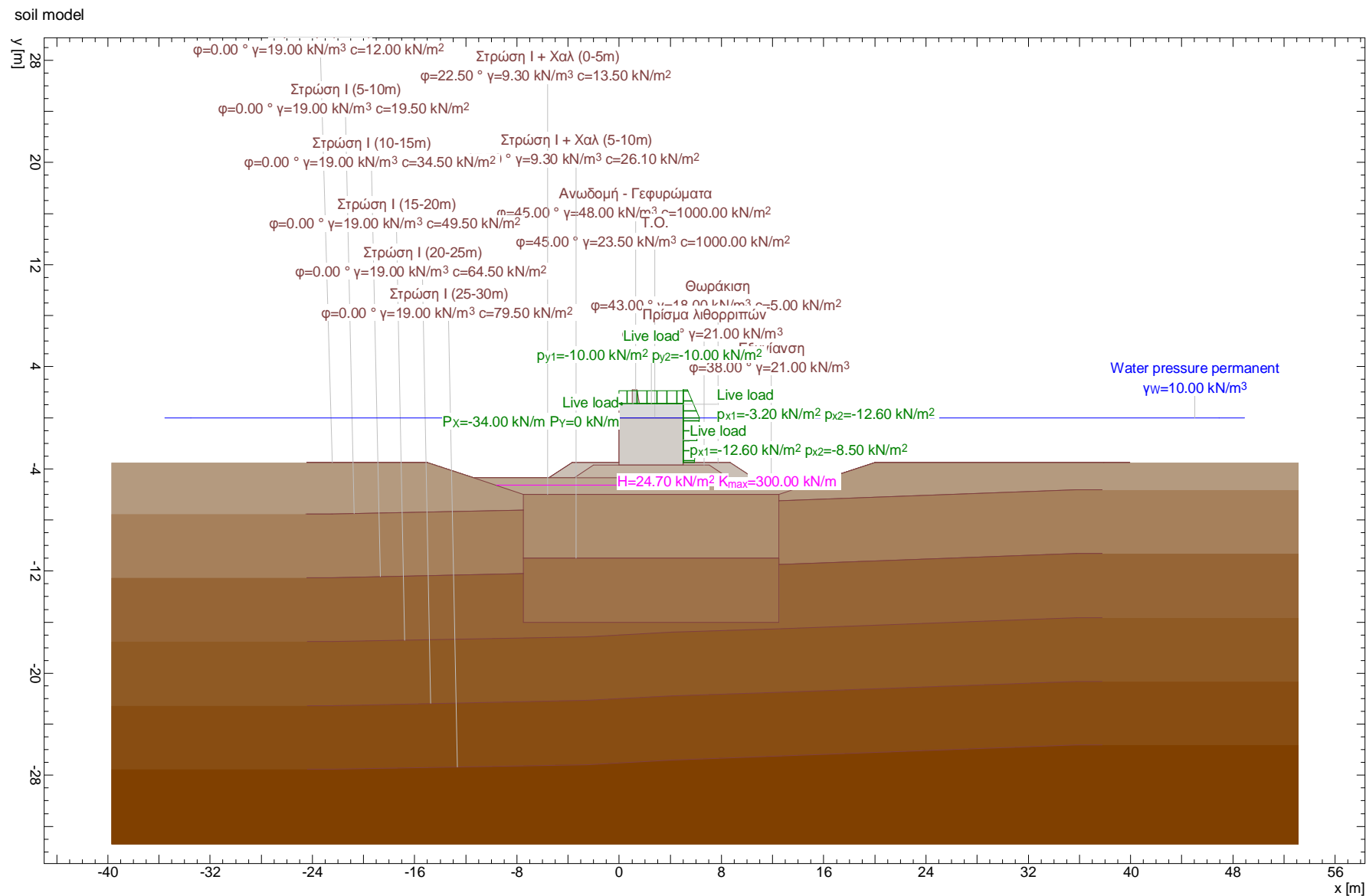
Nr.:

ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Α-Α

soil model



Nr.:



GEOTECHNICAL MODEL

Soil layer boundaries

Description	Parameters			Point	Polygon points					
	ϕ [°]	γ [kN/m ³]	c [kN/m ²]		x [m]	y [m]	Point	x [m]	y [m]	
Ανωδομή - Γεφυρώματα	45.00	48.00	1000.00	1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-5.48	-4.70	
				5	-3.68	-3.50	6	0	-3.50	
				7	0	1.10	8	1.00	1.10	
				9	1.00	2.20	10	1.40	2.20	
				11	1.55	1.10	12	5.00	1.10	
				13	5.00	-3.70	14	5.00	-3.50	
				15	8.68	-3.50	16	10.48	-4.70	
				17	16.40	-4.70	18	20.00	-3.50	
				19	37.93	-3.50				
Τ.Ο.	45.00	23.50	1000.00	1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-5.48	-4.70	
				5	-3.68	-3.50	6	0	-3.50	
				7	0	0	8	5.00	0	
				9	5.00	-3.70	10	5.00	-3.50	
				11	8.68	-3.50	12	10.48	-4.70	
				13	16.40	-4.70	14	20.00	-3.50	
				15	37.93	-3.50				
				1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-5.48	-4.70	
Θωράκιση	43.00	18.00	5.00	5	-3.68	-3.50	6	0	-3.50	
				7	0	-3.70	8	5.00	-3.70	
				9	5.00	-3.50	10	8.68	-3.50	
				11	10.48	-4.70	12	16.40	-4.70	
				13	20.00	-3.50	14	37.93	-3.50	
				1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-3.53	-4.70	
				5	-2.03	-3.70	6	0	-3.70	
				7	5.00	-3.70	8	7.03	-3.70	
				9	8.53	-4.70	10	10.48	-4.70	
Πρίσμα λιθορριπών	43.00	21.00	0	11	16.40	-4.70	12	20.00	-3.50	
				13	37.93	-3.50				
				1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-3.53	-4.70	
				5	-2.03	-3.70	6	0	-3.70	
				7	5.00	-3.70	8	7.03	-3.70	
				9	8.53	-4.70	10	10.48	-4.70	
				11	16.40	-4.70	12	20.00	-3.50	
				13	37.93	-3.50				
				1	-22.44	-3.50	2	-15.00	-3.50	
Εξυγίανση	38.00	21.00	0	3	-11.40	-4.70	4	16.40	-4.70	
				5	20.00	-3.50	6	37.93	-3.50	
				1	-22.44	-3.50	2	-15.00	-3.50	
Στρώση Ι (0-5m)	0.00	19.00	12.00	3	-11.40	-4.70	4	-7.50	-6.00	
				5	12.50	-6.00	6	16.40	-4.70	
				7	20.00	-3.50	8	37.93	-3.50	
Στρώση Ι + Χάλ (0-5m)	22.50	9.30	13.50	1	-22.53	-7.53	2	-7.50	-7.22	
				3	-7.50	-6.00	4	12.50	-6.00	
				5	12.50	-6.51	6	35.78	-5.63	
Στρώση Ι (5-10m)	0.00	19.00	19.50	1	-22.44	-7.53	2	-7.50	-7.22	
				3	-7.50	-11.00	4	12.50	-11.00	

Description	Parameters			Polygon points					
	ϕ [°]	γ [kN/m ³]	c [kN/m ²]	Point	x [m]	y [m]	Point	x [m]	y [m]
Στρώση I + Χαλ (5-10m)	17.70	9.30	26.10	5	12.50	-6.51	6	35.78	-5.63
				1	-22.44	-12.53	2	-7.50	-12.22
				3	-7.50	-11.00	4	12.50	-11.00
Στρώση I (10-15m)	0.00	19.00	34.50	5	12.50	-11.51	6	35.78	-10.63
				1	-22.44	-12.53	2	-7.50	-12.22
				3	-7.50	-16.00	4	12.50	-16.00
Στρώση I (15-20m)	0.00	19.00	49.50	5	12.50	-11.51	6	35.78	-10.63
				1	-22.41	-17.53	2	-2.58	-17.15
				3	4.04	-16.80	4	12.68	-16.50
Στρώση I (20-25m)	0.00	19.00	64.50	5	35.78	-15.63			
				1	-22.41	-22.53	2	-2.58	-22.15
				3	4.04	-21.80	4	12.68	-21.50
Στρώση I (25-30m)	0.00	19.00	79.50	5	35.78	-20.63			
				1	-22.41	-27.53	2	-2.58	-27.15
				3	4.04	-26.80	4	12.68	-26.50
				5	35.78	-25.63			

Water table

Water pressure permanent

Parameters			Polygon points					
γ_w [kN/m ³]	State	u	Point	x [m]	y [m]	Point	x [m]	y [m]
10.00	active	static	1	-33.53	0	2	46.93	0

State : Groundwater active or inactive in the analysis

u : Pore pressure calculated hydrodynamically or hydrostatically

Soil reinforcement elements

Parameters		Geometry			
H [kN/m ²]	K_{max} [kN/m]	x_1 [m]	y_1 [m]	x_2 [m]	y_2 [m]
24.70	300.00	-9.60	-5.30	14.60	-5.30

H : Soil reinforcement forces

K_{max} : Pull-out or breaking force of soil reinforcement element

ΛΙΜΕΝΙΚΗ ΕΓΚΑΤΑΣΤΑΣΗ ΕΞΥΠΗΡΕΤΗΣΗΣ ΣΚΑΦΩΝ ΣΤΗ ΘΕΣΗ ΨΑΝΗ ΝΑΥΠΑΚΤΟΥ										Page 5
ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Α-Α										19.10.23, 17:29
Στατικές συνθήκες										Larix-5 - Version 2.05

LOADS

Distributed load

Description	Action	x ₁ [m]	y ₁ [m]	x ₂ [m]	y ₂ [m]	p ₁ [kN/m ²]	p ₂ [kN/m ²]	Orientation
	Live load	0.00	1.10	5.00	1.10	-10.00	-10.00	y
	Live load	5.00	2.20	5.00	0	-3.20	-12.60	x
	Live load	5.00	0	5.00	-3.50	-12.60	-8.50	x

Line load

Description	Action	x [m]	y [m]	P _x [kN/m]	P _y [kN/m]
	Live load	0.00	1.10	-34.00	0

CALCULATION OPTIONS

Options

Method	δ _T [-]	n _L	Straight extensions of slip circles	
Krey	0.0200	50.000	with	Safety factor determined iteratively

δ_T : Convergence tolerance of the iteration
 n_L : Number of slices

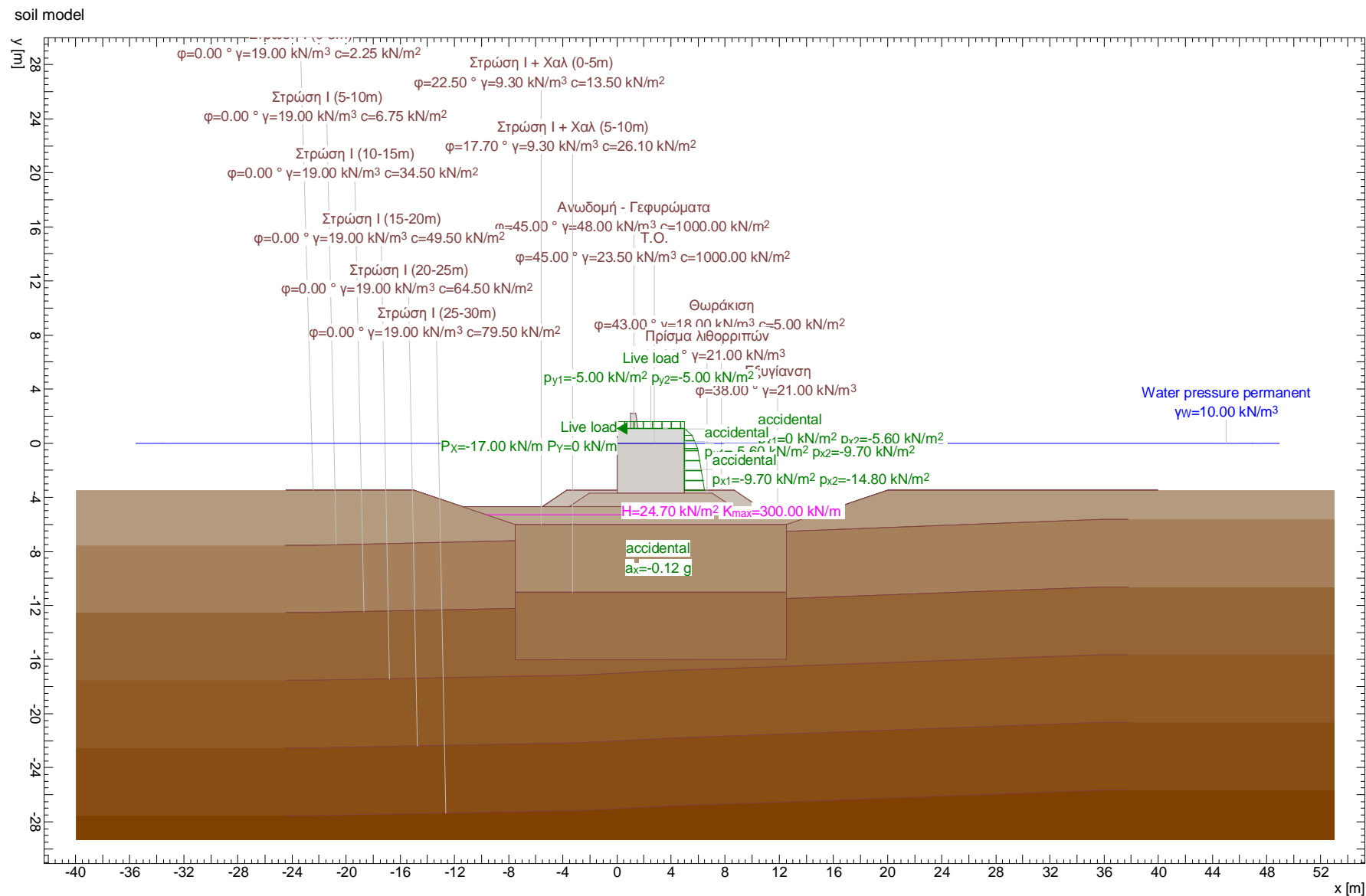
LIMIT VALUES

Slip circle with minimum safety

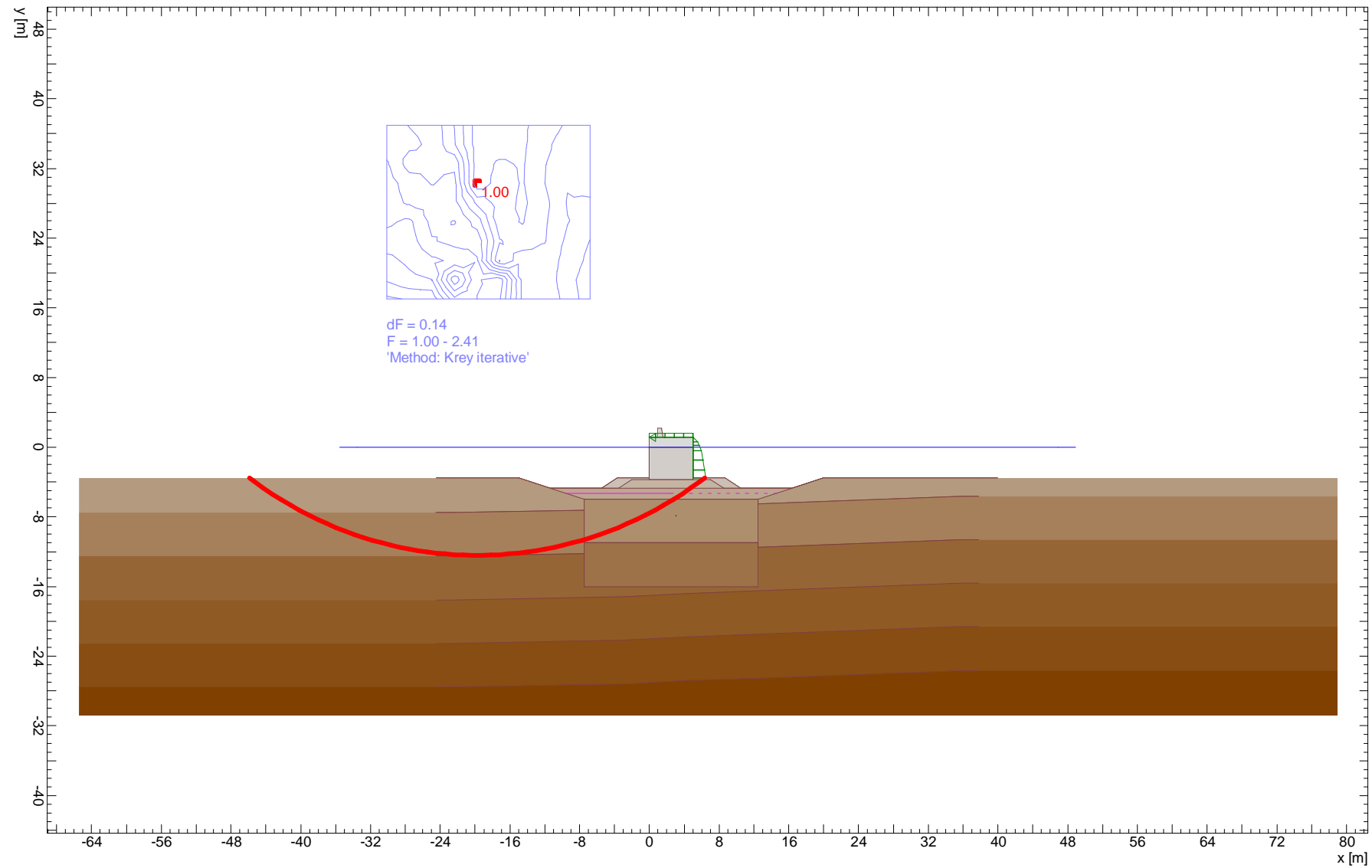
Circle No.	x [m]	y [m]	R [m]	point of constraint	Anchor	F _{ex} [-]	L _{req} [m]	L _{min} [m]	Remark see footnotes
544	-3.12	-1.88	7.89	4		2.97			

F_{ex} : existing safety, required safety F_{req} = 1.00
 L_{req} : calculated required free anchor length between L_{min} - L_{max}
 L_{min} : input minimum free anchor length

										Nr.:
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!Global safety / AC 1



Nr.:

ΛΙΜΕΝΙΚΗ ΕΓΚΑΤΑΣΤΑΣΗ ΕΞΥΠΗΡΕΤΗΣΗΣ ΣΚΑΦΩΝ ΣΤΗ ΘΕΣΗ ΨΑΝΗ ΝΑΥΠΑΚΤΟΥ										Page 8
ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Α-Α										19.10.23, 18:07
Σεισμικές συνθήκες										Larix-5 - Version 2.05
GEOTECHNICAL MODEL										
Soil layer boundaries										
Description	φ [°]	Parameters γ [kN/m ³]	c [kN/m ²]	Point	x [m]	y [m]	Polygon points Point	x [m]	y [m]	
Ανωδομή - Γεφυρώματα	45.00	48.00	1000.00	1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-5.48	-4.70	
				5	-3.68	-3.50	6	0	-3.50	
				7	0	1.10	8	1.00	1.10	
				9	1.00	2.20	10	1.40	2.20	
				11	1.55	1.10	12	5.00	1.10	
				13	5.00	-3.70	14	5.00	-3.50	
				15	8.68	-3.50	16	10.48	-4.70	
				17	16.40	-4.70	18	20.00	-3.50	
				19	37.93	-3.50				
Τ.Ο.	45.00	23.50	1000.00	1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-5.48	-4.70	
				5	-3.68	-3.50	6	0	-3.50	
				7	0	0	8	5.00	0	
				9	5.00	-3.70	10	5.00	-3.50	
				11	8.68	-3.50	12	10.48	-4.70	
				13	16.40	-4.70	14	20.00	-3.50	
				15	37.93	-3.50				
				1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-5.48	-4.70	
Θωράκιση	43.00	18.00	5.00	5	-3.68	-3.50	6	0	-3.50	
				7	0	-3.70	8	5.00	-3.70	
				9	5.00	-3.50	10	8.68	-3.50	
				11	10.48	-4.70	12	16.40	-4.70	
				13	20.00	-3.50	14	37.93	-3.50	
				1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-5.48	-4.70	
				5	-3.68	-3.50	6	0	-3.50	
				7	0	-3.70	8	5.00	-3.70	
				9	5.00	-3.50	10	8.68	-3.50	
Πρίσμα λιθορριπών	43.00	21.00	0	11	10.48	-4.70	12	16.40	-4.70	
				13	20.00	-3.50	14	37.93	-3.50	
				1	-22.44	-3.50	2	-15.00	-3.50	
				3	-11.40	-4.70	4	-3.53	-4.70	
				5	-2.03	-3.70	6	0	-3.70	
				7	5.00	-3.70	8	7.03	-3.70	
				9	8.53	-4.70	10	10.48	-4.70	
				11	16.40	-4.70	12	20.00	-3.50	
				13	37.93	-3.50				
				1	-22.44	-3.50	2	-15.00	-3.50	
Εξυγίανση	38.00	21.00	0	3	-11.40	-4.70	4	16.40	-4.70	
				5	20.00	-3.50	6	37.93	-3.50	
				1	-22.44	-3.50	2	-15.00	-3.50	
Στρώση Ι (0-5m)	0.00	19.00	2.25	3	-11.40	-4.70	4	-7.50	-6.00	
				5	12.50	-6.00	6	16.40	-4.70	
				7	20.00	-3.50	8	37.93	-3.50	
				1	-22.53	-7.53	2	-7.50	-7.22	
Στρώση Ι + Χαλ (0-5m)	22.50	9.30	13.50	3	-7.50	-6.00	4	12.50	-6.00	
				5	12.50	-6.51	6	35.78	-5.63	
				1	-22.44	-7.53	2	-7.50	-7.22	
Στρώση Ι (5-10m)	0.00	19.00	6.75	3	-7.50	-11.00	4	12.50	-11.00	

Nr.:

Description	Parameters			Polygon points					
	ϕ [°]	γ [kN/m ³]	c [kN/m ²]	Point	x [m]	y [m]	Point	x [m]	y [m]
Στρώση I + Χαλ (5-10m)	17.70	9.30	26.10	5	12.50	-6.51	6	35.78	-5.63
				1	-22.44	-12.53	2	-7.50	-12.22
				3	-7.50	-11.00	4	12.50	-11.00
Στρώση I (10-15m)	0.00	19.00	34.50	5	12.50	-11.51	6	35.78	-10.63
				1	-22.44	-12.53	2	-7.50	-12.22
				3	-7.50	-16.00	4	12.50	-16.00
Στρώση I (15-20m)	0.00	19.00	49.50	5	12.50	-11.51	6	35.78	-10.63
				1	-22.41	-17.53	2	-2.58	-17.15
				3	4.04	-16.80	4	12.68	-16.50
Στρώση I (20-25m)	0.00	19.00	64.50	5	35.78	-15.63			
				1	-22.41	-22.53	2	-2.58	-22.15
				3	4.04	-21.80	4	12.68	-21.50
Στρώση I (25-30m)	0.00	19.00	79.50	5	35.78	-20.63			
				1	-22.41	-27.53	2	-2.58	-27.15
				3	4.04	-26.80	4	12.68	-26.50
				5	35.78	-25.63			

Water table

Water pressure permanent

Parameters			Polygon points					
γ_w [kN/m ³]	State	u	Point	x [m]	y [m]	Point	x [m]	y [m]
10.00	active	static	1	-33.53	0	2	46.93	0

State : Groundwater active or inactive in the analysis

u : Pore pressure calculated hydrodynamically or hydrostatically

Soil reinforcement elements

Parameters		Geometry			
H [kN/m ²]	K_{max} [kN/m]	x_1 [m]	y_1 [m]	x_2 [m]	y_2 [m]
24.70	300.00	-9.60	-5.30	14.60	-5.30

H : Soil reinforcement forces

K_{max} : Pull-out or breaking force of soil reinforcement element

ΛΙΜΕΝΙΚΗ ΕΓΚΑΤΑΣΤΑΣΗ ΕΞΥΠΗΡΕΤΗΣΗΣ ΣΚΑΦΩΝ ΣΤΗ ΘΕΣΗ ΨΑΝΗ ΝΑΥΠΑΚΤΟΥ								Page 10	
ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Α-Α								19.10.23, 18:07	
Σεισμικές συνθήκες								Larix-5 - Version 2.05	
LOADS									
Distributed load									
Description	Action	x ₁ [m]	y ₁ [m]	x ₂ [m]	y ₂ [m]	p ₁ [kN/m ²]	p ₂ [kN/m ²]	Orientation	
	accidental	5.00	1.10	5.00	0.60	0	-5.60	x	
	accidental	5.00	0.60	5.00	-0.40	-5.60	-9.70	x	
	accidental	5.00	-0.40	5.00	-3.50	-9.70	-14.80	x	
	Live load	0.00	1.10	5.00	1.10	-5.00	-5.00	y	
Line load									
Description	Action	x [m]	y [m]	P _x [kN/m]	P _y [kN/m]				
	Live load	0.00	1.10	-17.00	0				
Earthquake load									
Description	Action	a _x [g]	a _y [g]						
	accidental	-0.12	0.10						
a _x : Horizontal acceleration									
a _y : Vertical acceleration									
CALCULATION OPTIONS									
Options									
Method	δ _T [-]	n _L	Straight extensions of slip circles						
Krey	0.0200	50.000	with		Safety factor determined iteratively				
δ _T : Convergence tolerance of the iteration									
n _L : Number of slices									
								Nr.:	

LIMIT VALUES

Slip circle with minimum safety

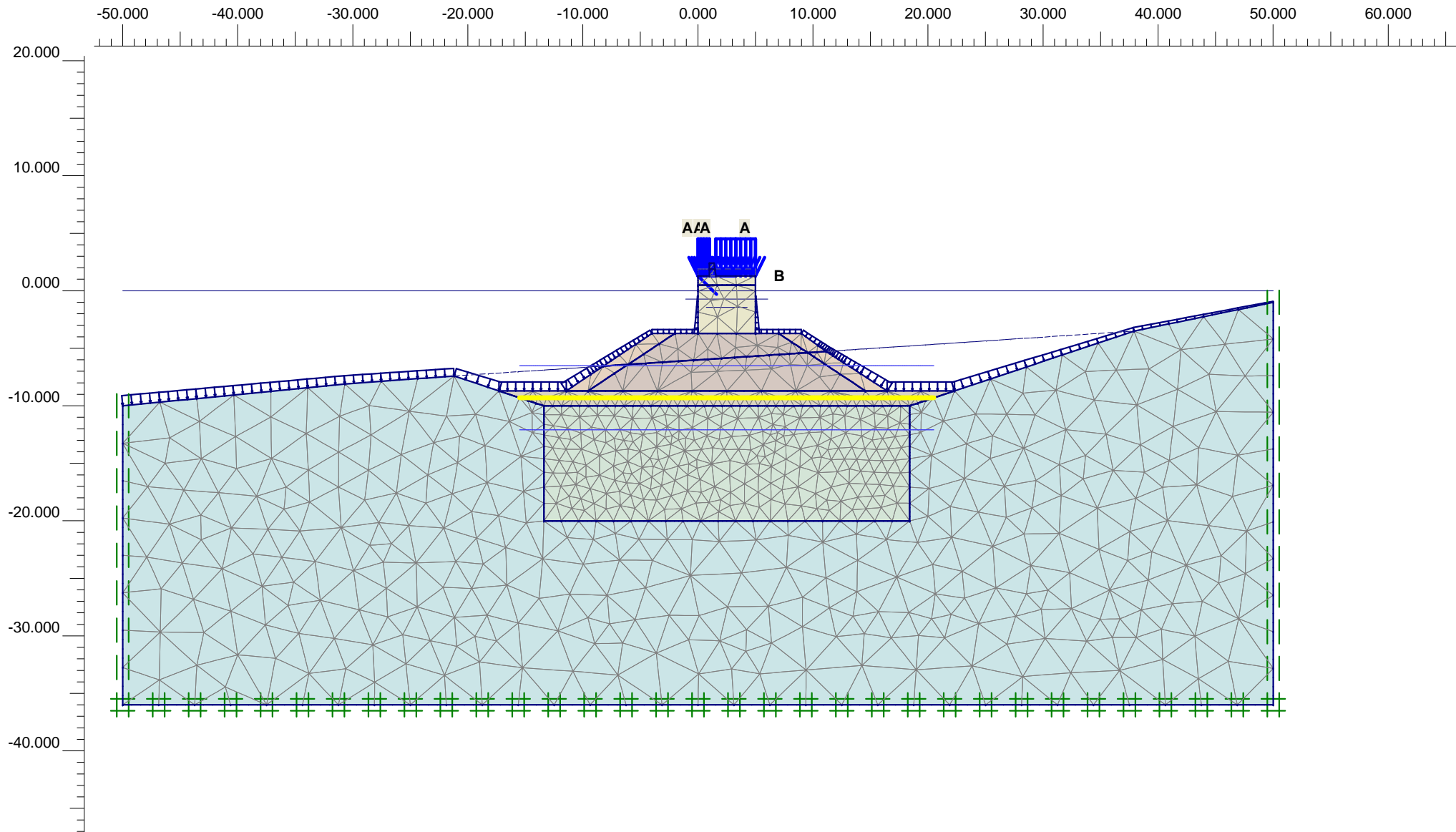
Circle No.	x [m]	y [m]	R [m]	point of constraint	Anchor	F _{ex} [-]	L _{req} [m]	L _{min} [m]	Remark see footnotes	
643	-19.77	30.30	42.72	3		1.00				

F_{ex} : existing safety, required safety F_{req} = 1.00
 L_{req} : calculated required free anchor length between L_{min} - L_{max}
 L_{min} : input minimum free anchor length

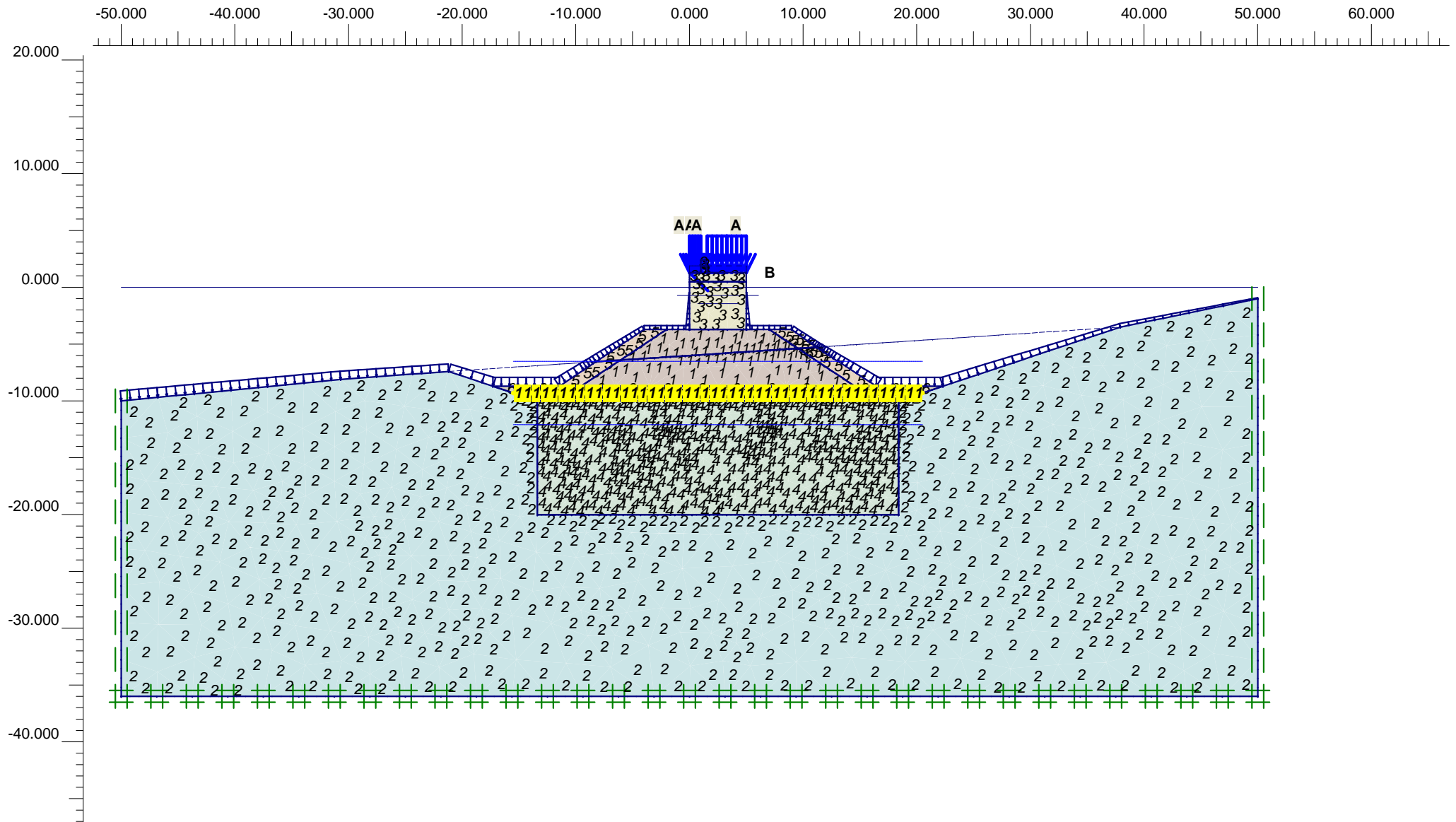
ΠΑΡΑΡΤΗΜΑ ΣΤ-6

**Έλεγχοι καθιζήσεων – Αναλυτικά δεδομένα και
αποτελέσματα προγράμματος Plaxis 7.2**

ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Γ-Γ



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Flow Field
Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m

PLAXIS
Finite Element Code for Soil and Rock Analyses

Project description

ΕΔΑΦΙΚΕΣ ΣΤΡΩΣΕΙΣ ΚΑΙ ΛΟΙΠΑ ΥΛΙΚΑ ΠΡΟΣΟΜΟΙΩΜΑΤΟΣ

Project name

4195-ΤΟΜΗ-Γ-Γ...

Step

55

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΓΕΩΤΕΧΝΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΕΔΑΦΙΚΩΝ ΣΤΡΩΣΕΩΝ ΠΥΘΜΕΝΑ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Soil and Interfaces Info - Hardening Soil

Step : 55

Page : 1

Number	Identification	Type	γ_{dry} [kN/m ³]	γ_{wet} [kN/m ³]	k_x [m/day]	k_y [m/day]	E_{50}^{ref} [kN/m ²]	$E_{\text{oed}}^{\text{ref}}$ [kN/m ²]	$E_{\text{ur}}^{\text{ref}}$ [kN/m ²]	c_{ref} [kN/m ²]
2	Layer I	Undrained	19.0	19.0	2.8000E-5	1.4000E-5	3400.0	3000.0	10200.0	2.0
4	Layer I + Stone columns	Drained	19.3	19.3	0.0050	0.0050	5400.0	4800.0	16200.0	1.7

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΓΕΩΤΕΧΝΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΕΔΑΦΙΚΩΝ ΣΤΡΩΣΕΩΝ ΠΥΘΜΕΝΑ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Soil and Interfaces Info - Hardening Soil

Step : 55

Page : 2

Number	φ [°]	ψ [°]	v_{ur} [-]	p_{ref} [kN/m ²]	Power [-]	K_0^{nc} [-]	c_{incr} [kN/m ³]	y_{ref} [m]	C_k [-]	e_{init} [-]	e_{min} [-]
2	25.0	0.0	0.20	100	1.000	0.577	0.0	0.0	1E15	1.0	0.0
4	32.0	0.0	0.20	100	1.000	0.470	0.0	0.0	1E15	1.0	0.0

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΓΕΩΤΕΧΝΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΕΔΑΦΙΚΩΝ ΣΤΡΩΣΕΩΝ ΠΥΘΜΕΝΑ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Soil and Interfaces Info - Hardening Soil

Step : 55

Page : 3

Number	e_{\max} [-]	R_f [-]	T-Strength [kN/m ²]	R_{inter} [-]	Interface Permeability [-]	$\delta_{\text{-inter}}$ [m]
2	999.0	0.90	0.0	1.00	Neutral	0.000
4	999.0	0.90	0.0	1.00	Neutral	0.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΠΑΡΑΜΕΤΡΟΙ ΓΕΩΥΛΙΚΩΝ ΚΑΙ ΛΟΙΠΩΝ ΥΛΙΚΩΝ ΠΟΥ ΔΟΜΟΥΝ ΤΟ ΣΩΜΑ ΤΟΥ ΕΡΓΟΥ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Soil and Interfaces Info - Mohr-Coulomb

Step : 55

Page : 1

Number	Identification	Type	γ_{dry} [kN/m ³]	γ_{wet} [kN/m ³]	k_x [m/day]	k_y [m/day]	ν [-]	E_{ref} [kN/m ²]	c_{ref} [kN/m ²]	ϕ [°]
1	Crushed stone	Drained	21.0	21.0	10.0000	10.0000	0.25	41667.0	1.0	43.0
3	Concrete	Drained	23.5	23.5	1.0000E-7	1.0000E-7	0.20	3E7	1E3	0.0
5	Armor stone	Drained	18.0	18.0	100.0000	100.0000	0.25	83333.0	5.0	43.0
6	Sand gravel	Drained	21.0	21.0	0.1000	0.1000	0.30	22286.0	0.5	36.0

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΠΑΡΑΜΕΤΡΟΙ ΓΕΩΥΛΙΚΩΝ ΚΑΙ ΛΟΙΠΩΝ ΥΛΙΚΩΝ ΠΟΥ ΔΟΜΟΥΝ ΤΟ ΣΩΜΑ ΤΟΥ ΕΡΓΟΥ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Soil and Interfaces Info - Mohr-Coulomb

Step : 55

Page : 2

Number	ψ [°]	E_{incr} [kN/m ³]	c_{incr} [kN/m ³]	y_{ref} [m]	C_k [-]	e_{init} [-]	T-Strength [kN/m ²]	R_{inter} [-]	Interface Permeability [-]
1	0.0	0.0	0.0	0.0	1E15	1.0	0.0	1.00	Neutral
3	0.0	0.0	0.0	0.0	1E15	1.0	0.0	1.00	Neutral
5	0.0	0.0	0.0	0.0	1E15	1.0	0.0	1.00	Neutral
6	0.0	0.0	0.0	0.0	1E15	1.0	0.0	0.80	Neutral

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΠΑΡΑΜΕΤΡΟΙ ΓΕΩΥΦΑΣΜΑΤΟΣ ΟΝΟΜΑΣΤΙΚΗΣ ΕΦΕΛΚΥΣΤΙΚΗΣ ΑΝΤΟΧΗΣ 800 kN/m

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-ΤΟΜΗ-Γ-Γ-R0

Output : Material data sets - Geotextiles

Step : 55

Page : 1

Number	Identification	EA [kN/m]	ν [-]
1	800 kN/m	6.7E3	0.00

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΣΤΑΔΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0.plx

Output : Calculations list

Page : 1

Identification	Phase No.	Start from	Calculation	Loading input	First	Last	Water
Initial phase	0	N/A	N/A	N/A			0
Αρχική κατάσταση	1	0	Plastic	Total multipliers	1	2	0
Εκσκαφή πυθμένα	2	1	Plastic	Staged construction	3	6	0
Κατασκευή χαλικοπασσάλων και εξυγιαντικής στρώσης	3	2	Plastic	Staged construction	7	13	0
Κατασκευή πρίσματος έδρασης (αστράγγιστες συνθήκες)	4	3	Plastic	Staged construction	14	24	0
Ολοκλήρωση Α' Φάσης Κατασκευής: Τοποθέτηση Τ.Ο. (αστράγγιστες συνθήκες)	5	4	Plastic	Staged construction	25	28	0
Απομάκρυνση Τ.Ο. επιφόρτισης (αστράγγιστες συνθήκες)	6	5	Plastic	Staged construction	29	35	0
Κατασκευή πρίσματος έδρασης (στραγγιζόμενες συνθήκες)	7	3	Plastic	Staged construction	36	46	0
Τοποθέτηση Τ.Ο. (στραγγιζόμενες συνθήκες)	8	7	Plastic	Staged construction	47	49	0
Κατασκευή ανωδομής (στραγγιζόμενες συνθήκες)	9	8	Plastic	Staged construction	50	52	0
Επιβολή κινητών	10	9	Plastic	Total multipliers	53	55	0

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΣΤΑΔΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0.plx

Output : Calculations list

Page : 2

Log info

N/A

No errors.

No errors.

No errors.

No errors.

No errors.

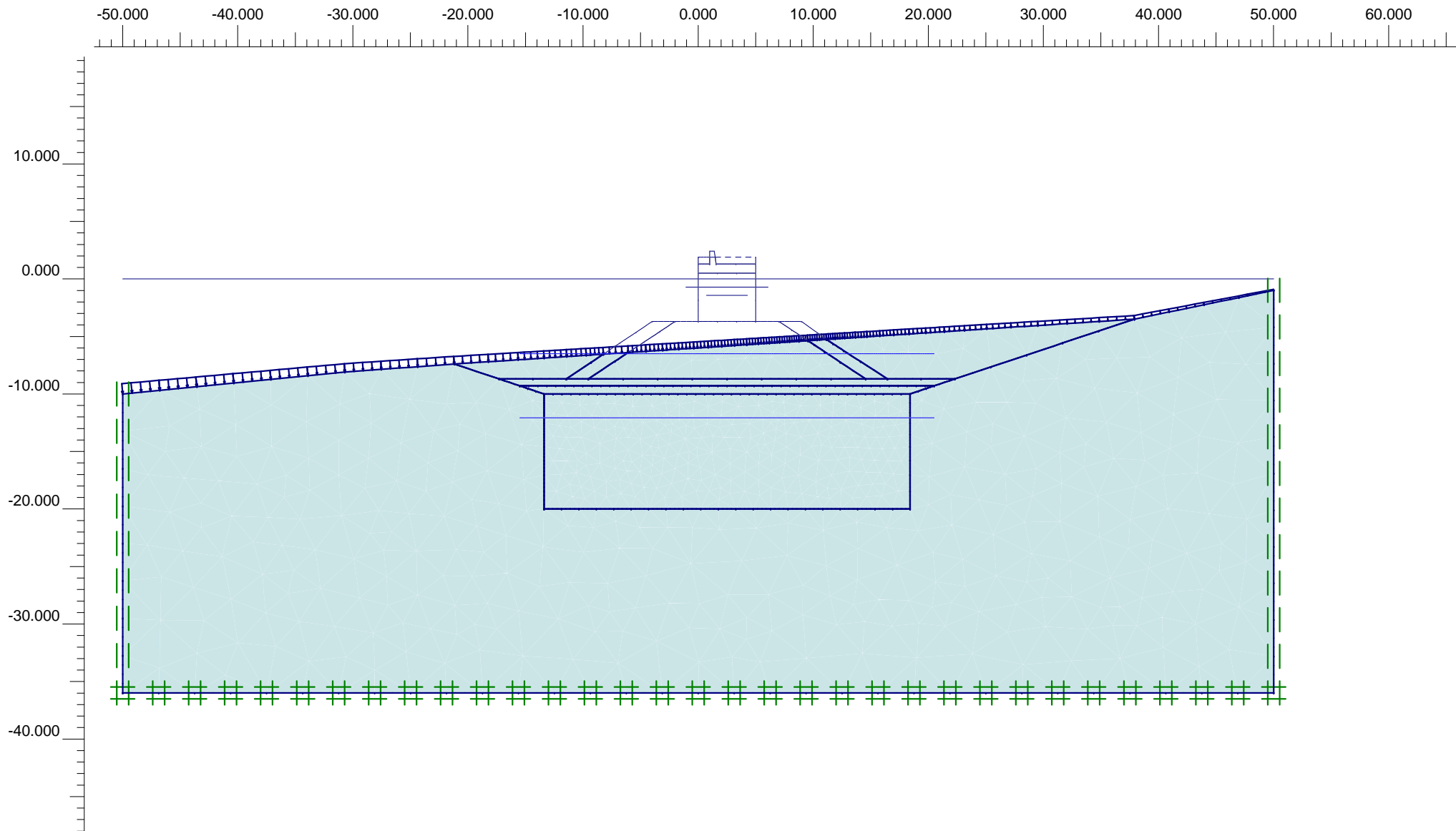
No errors.

No errors.

No errors.

No errors.

No errors.



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Finite Element Code for Soil and Rock Analyses

Version 7.2.9.147

Project description

ΦΑΣΗ 1: ΑΡΧΙΚΗ ΚΑΤΑΣΤΑΣΗ

Project name

4195-TOMH-Γ-Γ...

Step

2

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 1: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 2

Page : 1

Step info

Step : 2 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.000
1.000

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements
Contraction tunnel A
Contraction tunnel B
Load system A
Load system B
Soil weight
Acceleration
Strength reduction factor
Time

Mdisp: 0.000
McontrA: 0.000
McontrB: 0.000
MloadA: 0.000
MloadB: 0.000
Mweight: 0.000
Maccel: 0.000
Msf: 0.000
Increment: 0.000

Σ-Mdisp: 0.000
Σ-McontrA: 0.000
Σ-McontrB: 0.000
Σ-MloadA: 0.000
Σ-MloadB: 0.000
Σ-Mweight: 1.000
Σ-Maccel: 0.000
Σ-Msf: 1.000
End time: 0.000

Staged construction

Active proportion total area
Active proportion of stage

Marea : 0.000
Mstage : 0.000

ΣMarea : 0.979
ΣMstage : 0.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 1: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 2

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

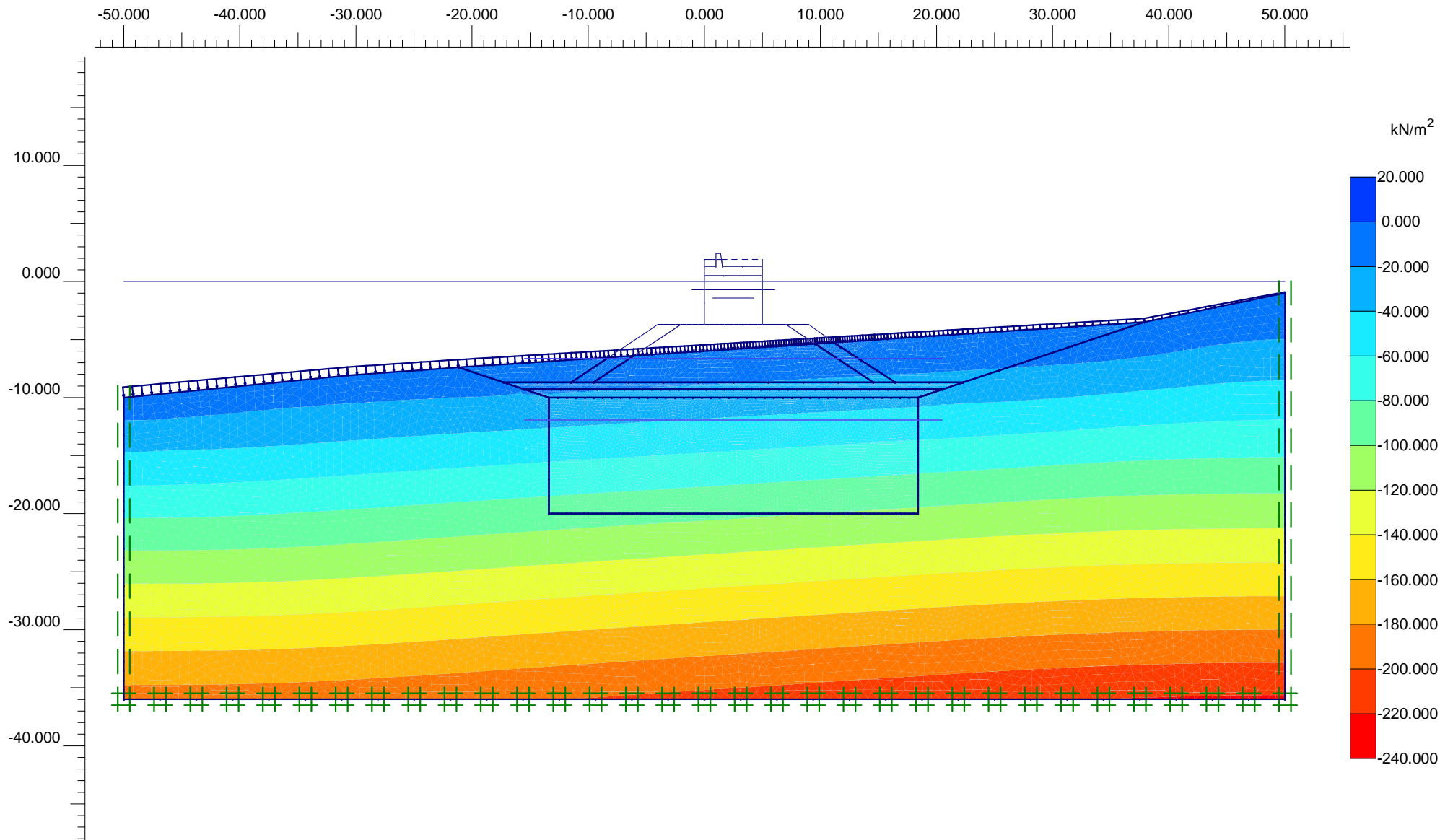
ForceX : 0.000 kN/m
ForceY : 0.000 kN/m

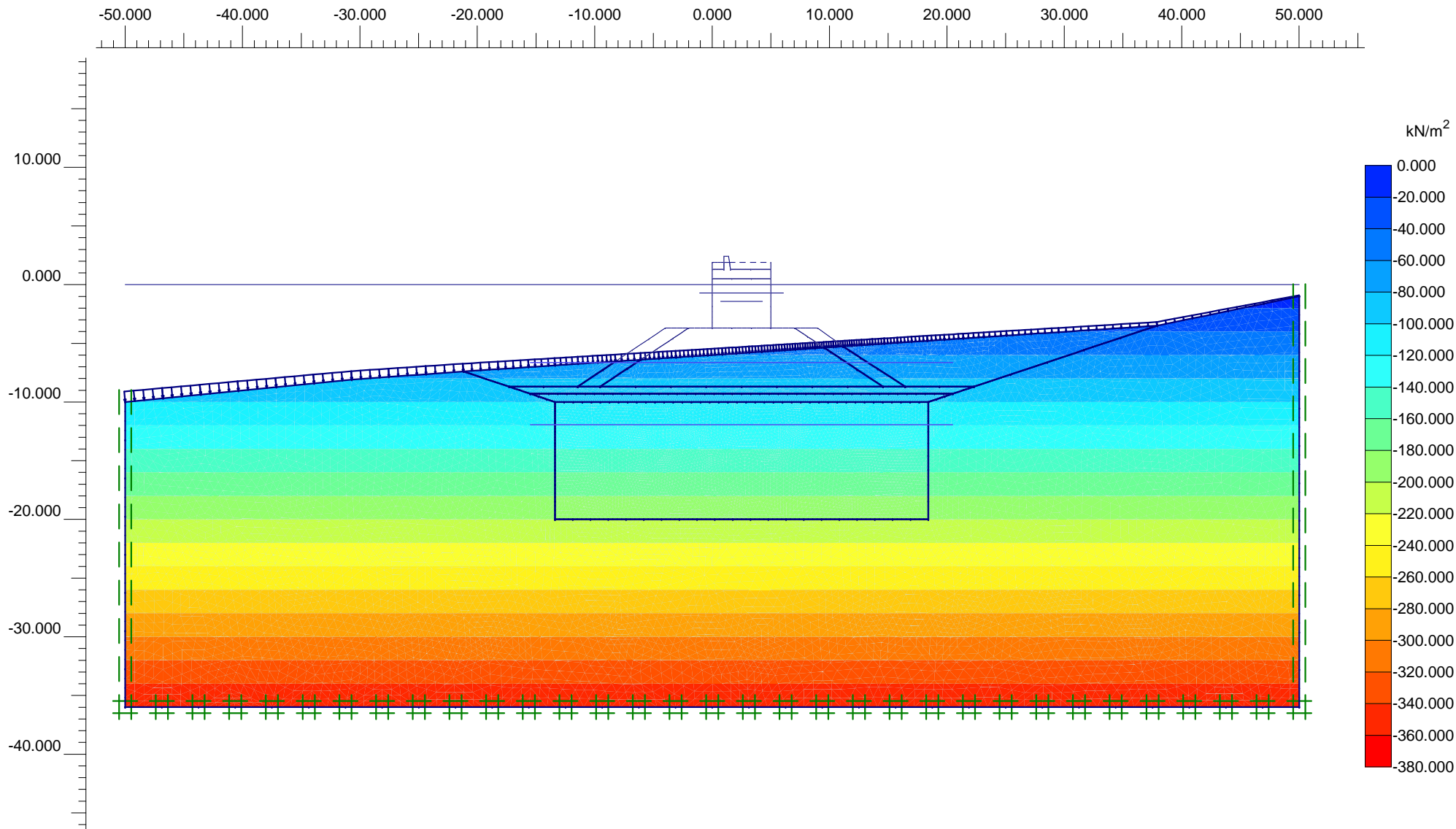
Consolidation

Realized Pmax : 0.000 kN/m²

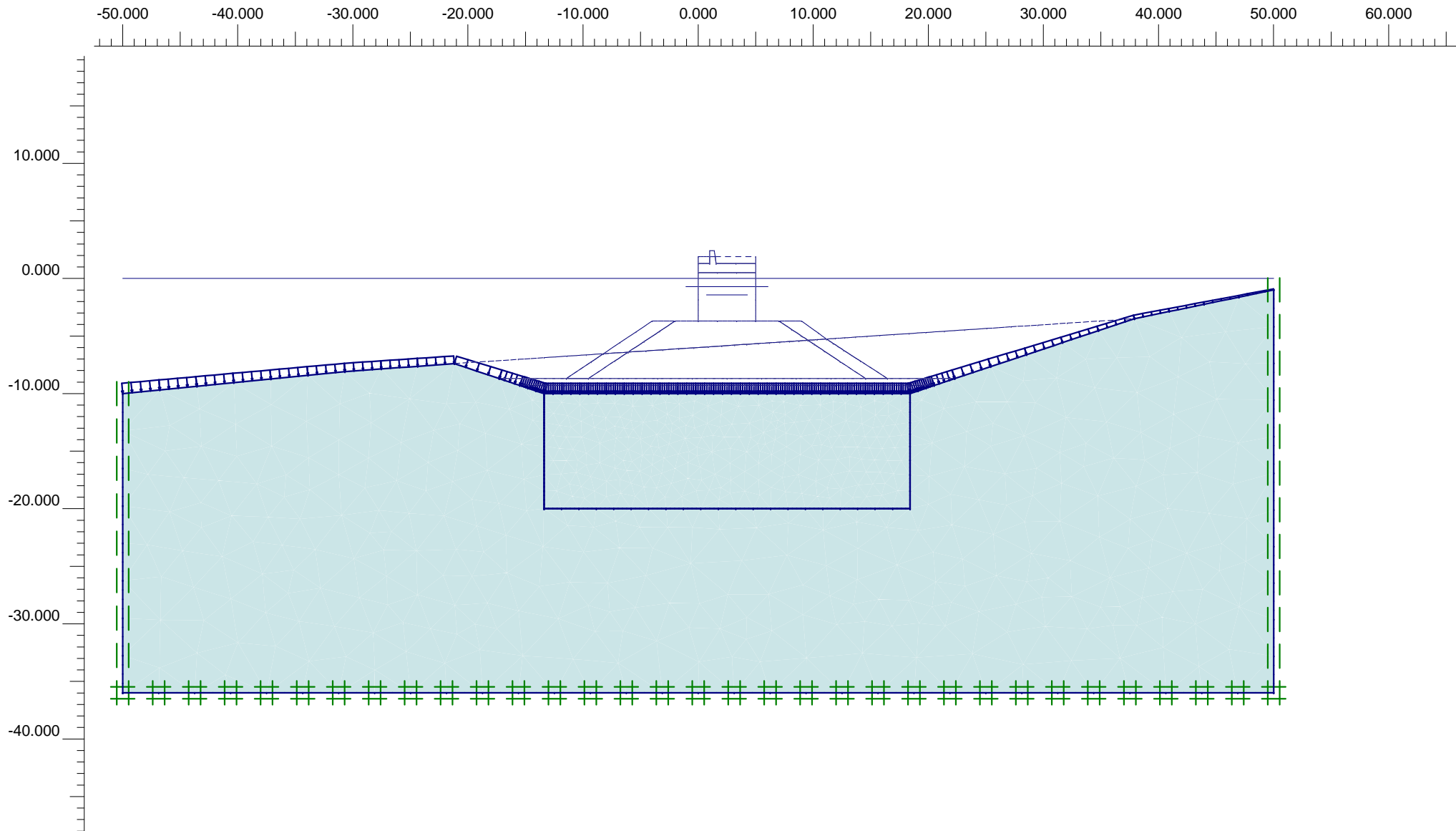
PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.004	12115	12115	413	0	0	0	0
2	0.002	12458	12458	101	0	0	0	0
3	0.009	12536	12536	647	0	0	0	0
4	0.002	12958	12958	60	0	0	0	0





Active pore pressures
 Extreme active pore pressure -360.00 kN/m²
 (pressure = negative)



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 2: ΕΚΣΚΑΦΗ ΠΥΘΜΕΝΑ

Project name

4195-TOMH-Γ-Γ...

Step

6

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 2: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 6

Page : 1

Step info

Step : 6 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.493
0.539

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.916
Active proportion of stage	Mstage :	0.068	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 2: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 6

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

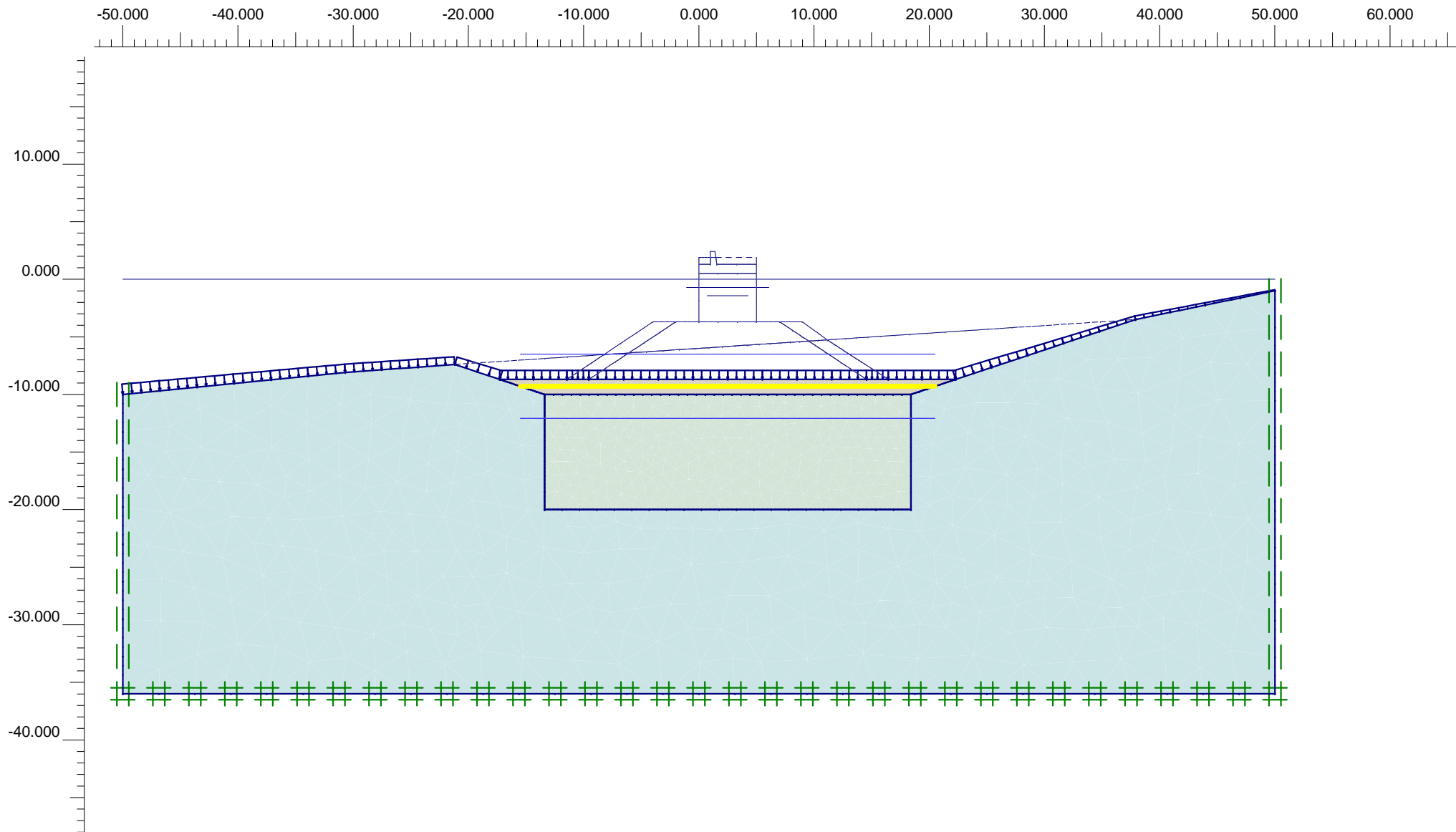
ForceX : 0.000 kN/m
ForceY : 0.000 kN/m

Consolidation

Realized Pmax : 0.000 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.000	1233	1233	0	0	0	0	0
2	0.000	1224	1224	7	0	0	0	0



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 3: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 13

Page : 1

Step info

Step : 13 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

1.833
1.021

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.931
Active proportion of stage	Mstage :	0.358	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 3: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 13

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

ForceX : 0.000 kN/m

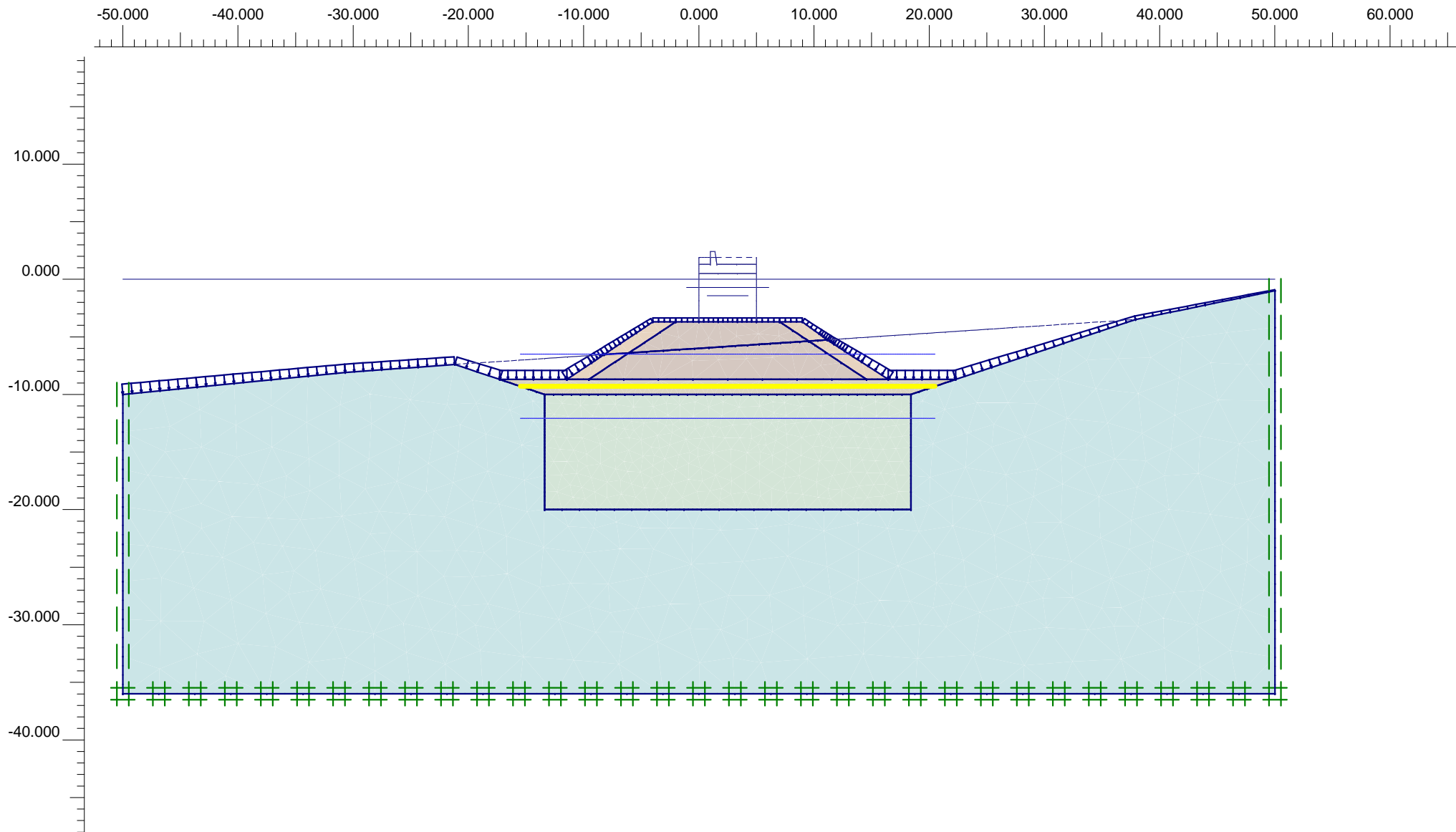
ForceY : 0.000 kN/m

Consolidation

Realized Pmax : 0.000 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.000	271	94	16	0	0	0	0
2	0.000	271	94	1	0	0	0	0



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 4: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 24

Page : 1

Step info

Step : 24 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.090
0.166

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements
Contraction tunnel A
Contraction tunnel B
Load system A
Load system B
Soil weight
Acceleration
Strength reduction factor
Time

Mdisp: 0.000
McontrA: 0.000
McontrB: 0.000
MloadA: 0.000
MloadB: 0.000
Mweight: 0.000
Maccel: 0.000
Msf: 0.000
Increment: 0.000

Σ-Mdisp: 0.000
Σ-McontrA: 0.000
Σ-McontrB: 0.000
Σ-MloadA: 0.000
Σ-MloadB: 0.000
Σ-Mweight: 1.000
Σ-Maccel: 0.000
Σ-Msf: 1.000
End time: 0.000

Staged construction

Active proportion total area
Active proportion of stage

Marea : 0.000
Mstage : 0.020

ΣMarea : 0.964
ΣMstage : 1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 4: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 24

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

Consolidation

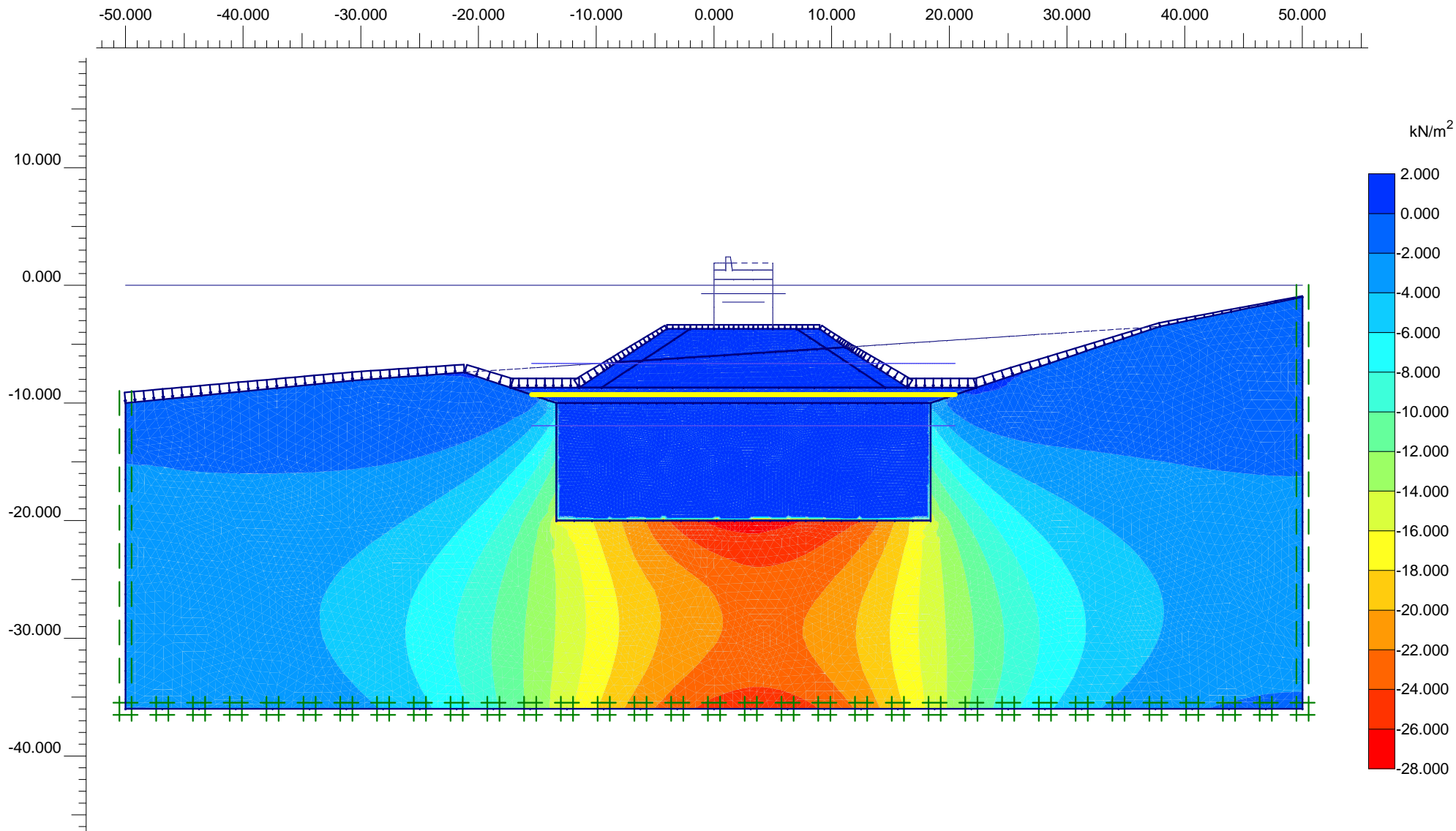
ForceX : 0.000 kN/m

Realized Pmax : 26.858 kN/m²

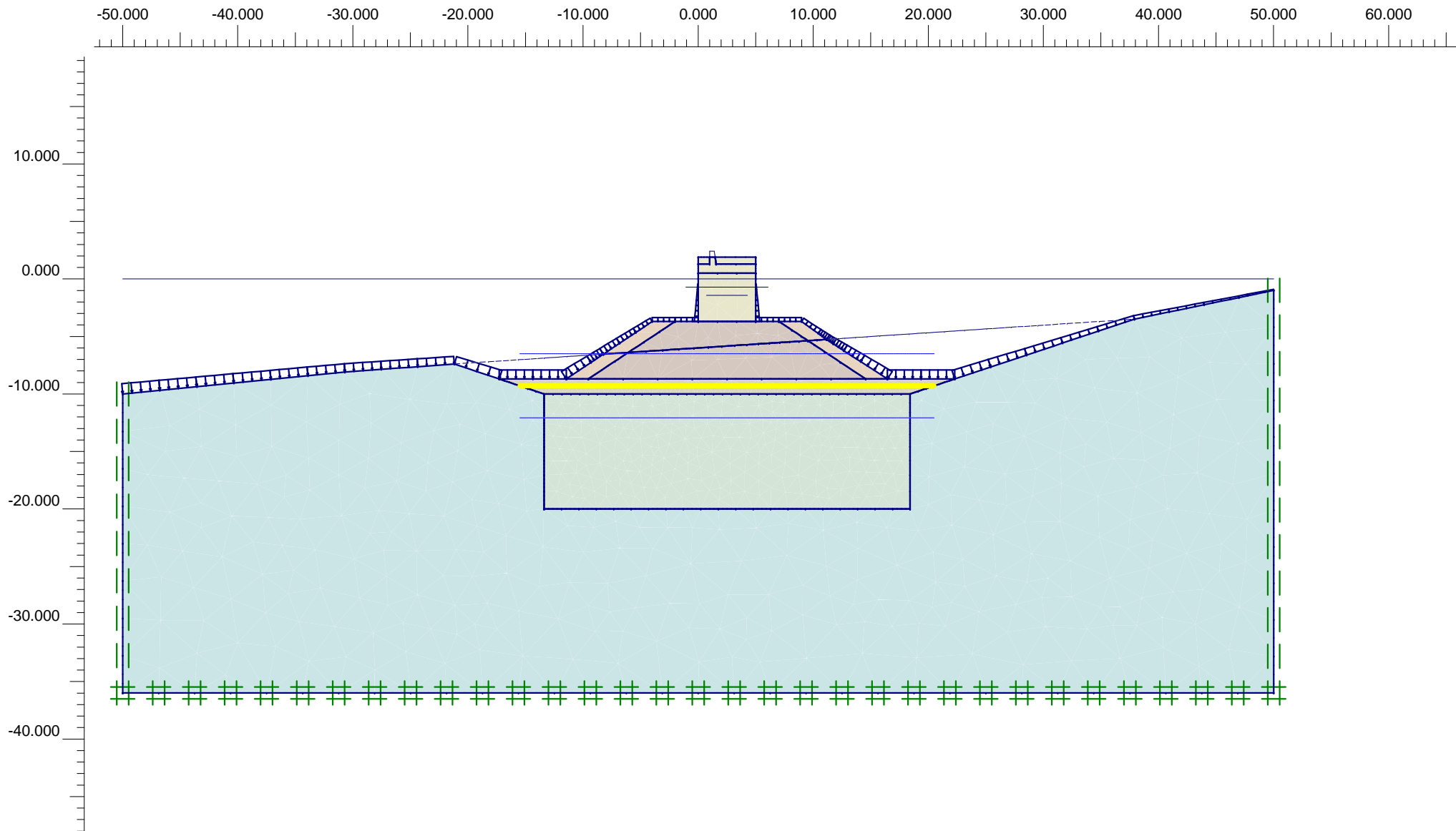
ForceY : 0.000 kN/m

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.001	6182	5238	2263	29	27	0	0
2	0.000	6113	5216	124	28	0	0	0



Excess pore pressures
 Extreme excess pore pressure -26.94 kN/m²
 (pressure = negative)



Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 5: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 28

Page : 1

Step info

Step : 28 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.347
0.197

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements
Contraction tunnel A
Contraction tunnel B
Load system A
Load system B
Soil weight
Acceleration
Strength reduction factor
Time

Mdisp: 0.000
McontrA: 0.000
McontrB: 0.000
MloadA: 0.000
MloadB: 0.000
Mweight: 0.000
Maccel: 0.000
Msf: 0.000
Increment: 0.000

Σ-Mdisp: 0.000
Σ-McontrA: 0.000
Σ-McontrB: 0.000
Σ-MloadA: 0.000
Σ-MloadB: 0.000
Σ-Mweight: 1.000
Σ-Maccel: 0.000
Σ-Msf: 1.000
End time: 0.000

Staged construction

Active proportion total area
Active proportion of stage

Marea : 0.000
Mstage : 0.105

ΣMarea : 0.973
ΣMstage : 1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 5: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 28

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

Consolidation

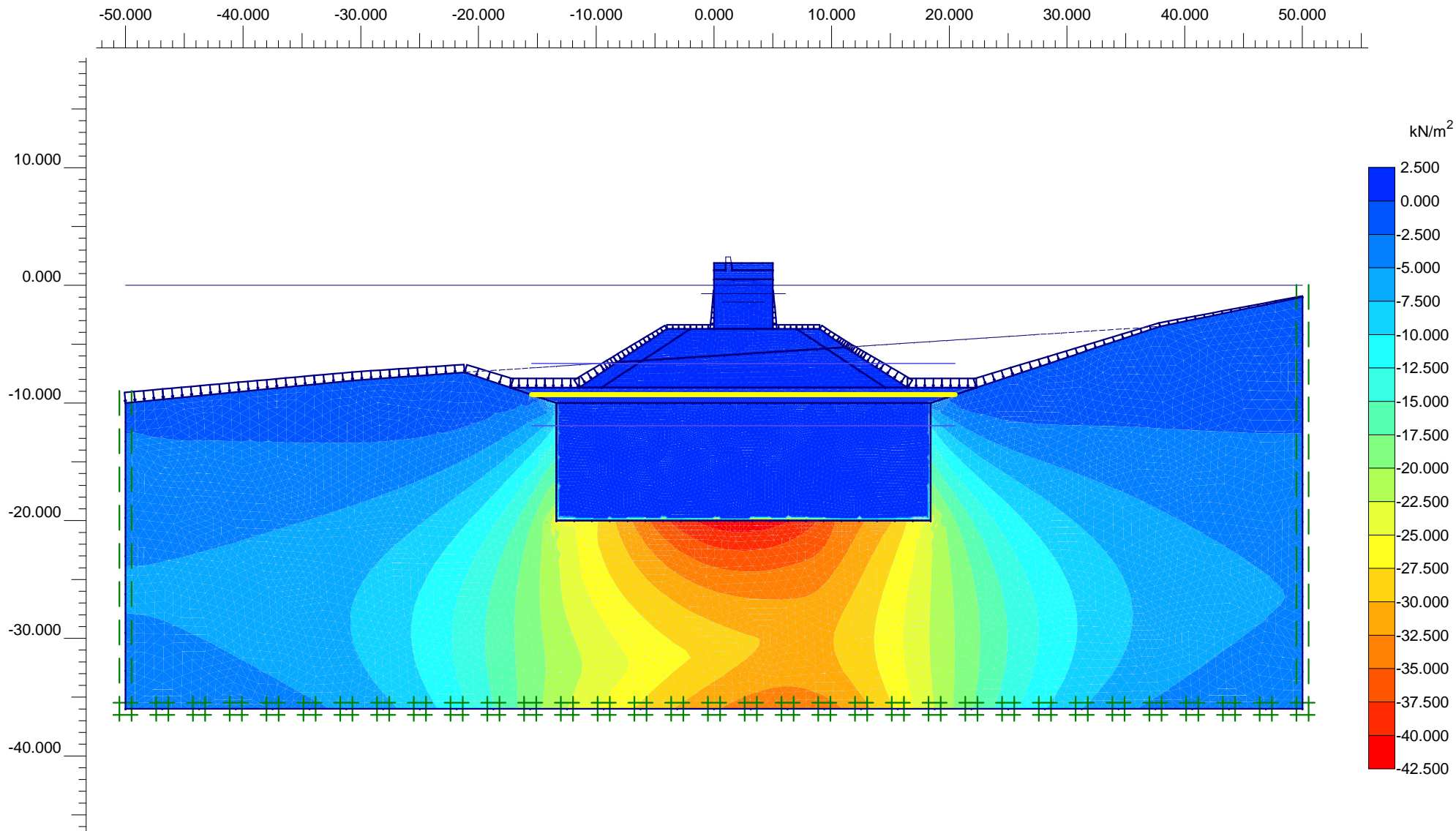
ForceX : 0.000 kN/m

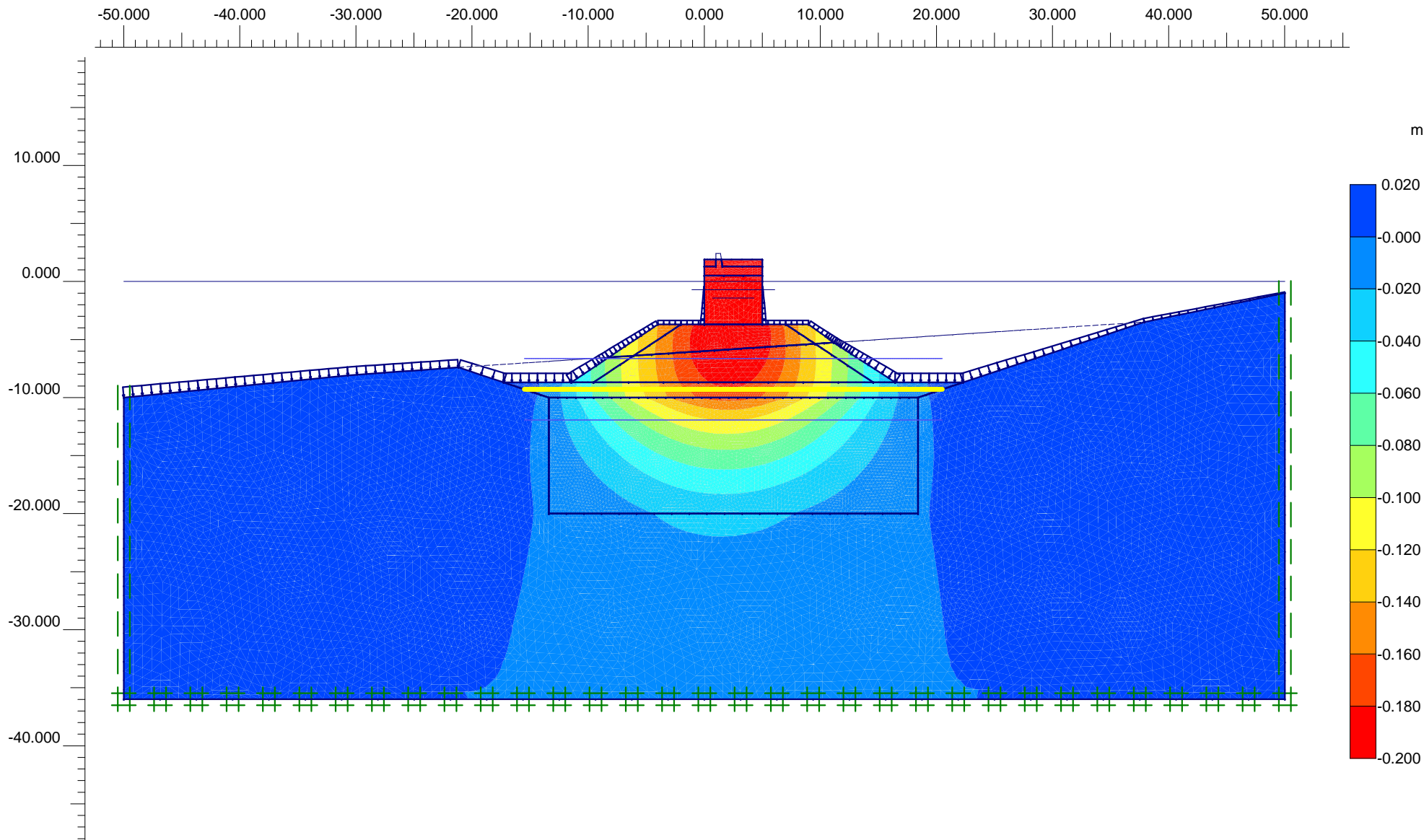
ForceY : 0.000 kN/m

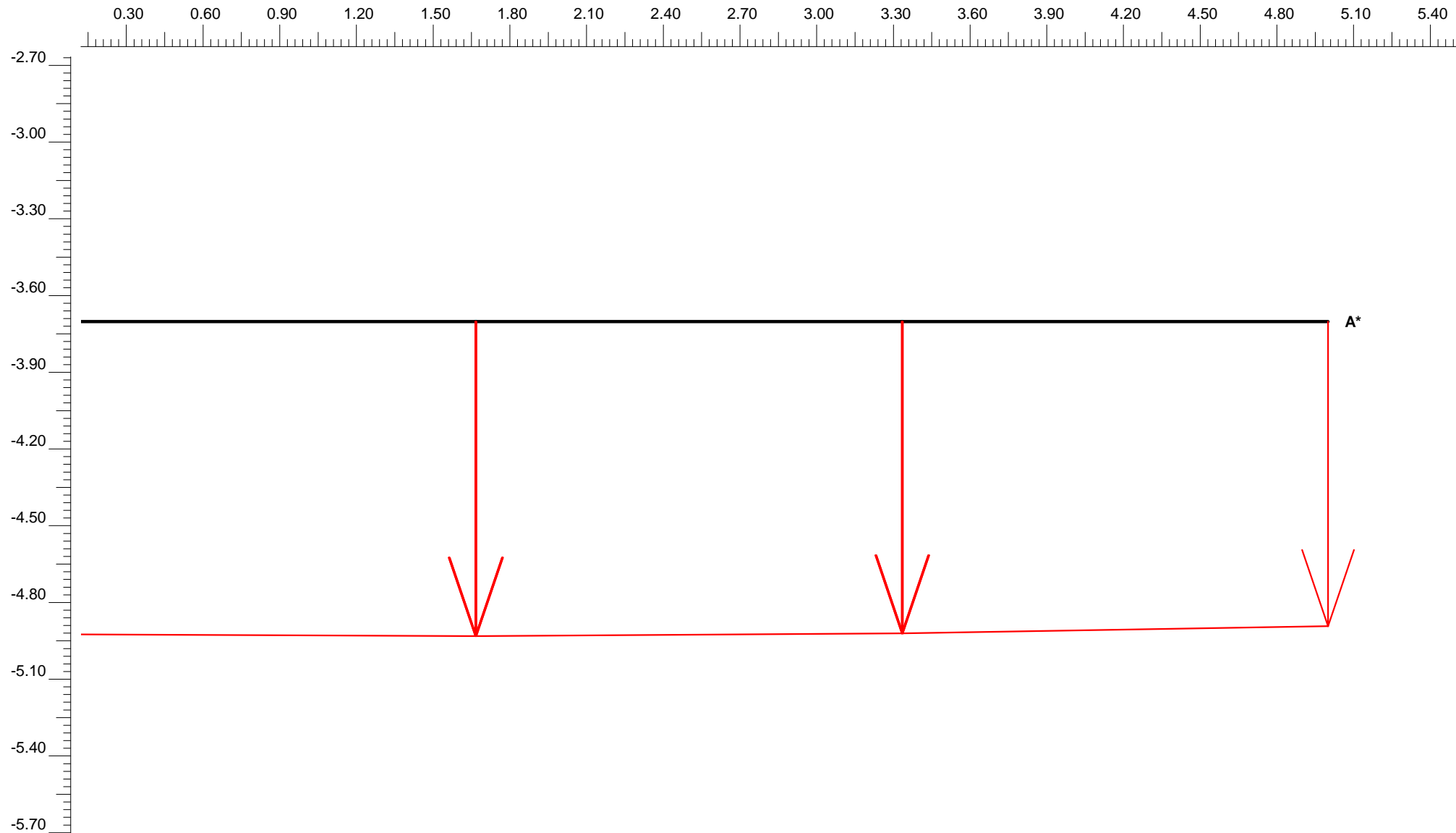
Realized Pmax : 41.572 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.001	8100	6542	1166	98	81	0	0
2	0.001	8024	6519	193	98	0	0	0







Vertical displacements
 Extreme vertical displacement $-198.45 \cdot 10^{-3}$ m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 5: ΔΙΑΓΡΑΜΜΑ ΚΑΘΙΖΗΣΕΩΝ ΣΤΗΝ ΕΔΡΑΣΗ ΤΩΝ Τ.Ο.

Project name

4195-ΤΟΜΗ-Γ-Γ...

Step

28

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 5: ΑΠΟΤΕΛΕΣΜΑΤΑ ΑΝΑΜΕΝΟΜΕΝΩΝ ΚΑΘΙΖΗΣΕΩΝ Α΄ ΦΑΣΗΣ ΣΤΗΝ ΕΔΡΑΣΗ ΤΩΝ Τ.Ο.

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

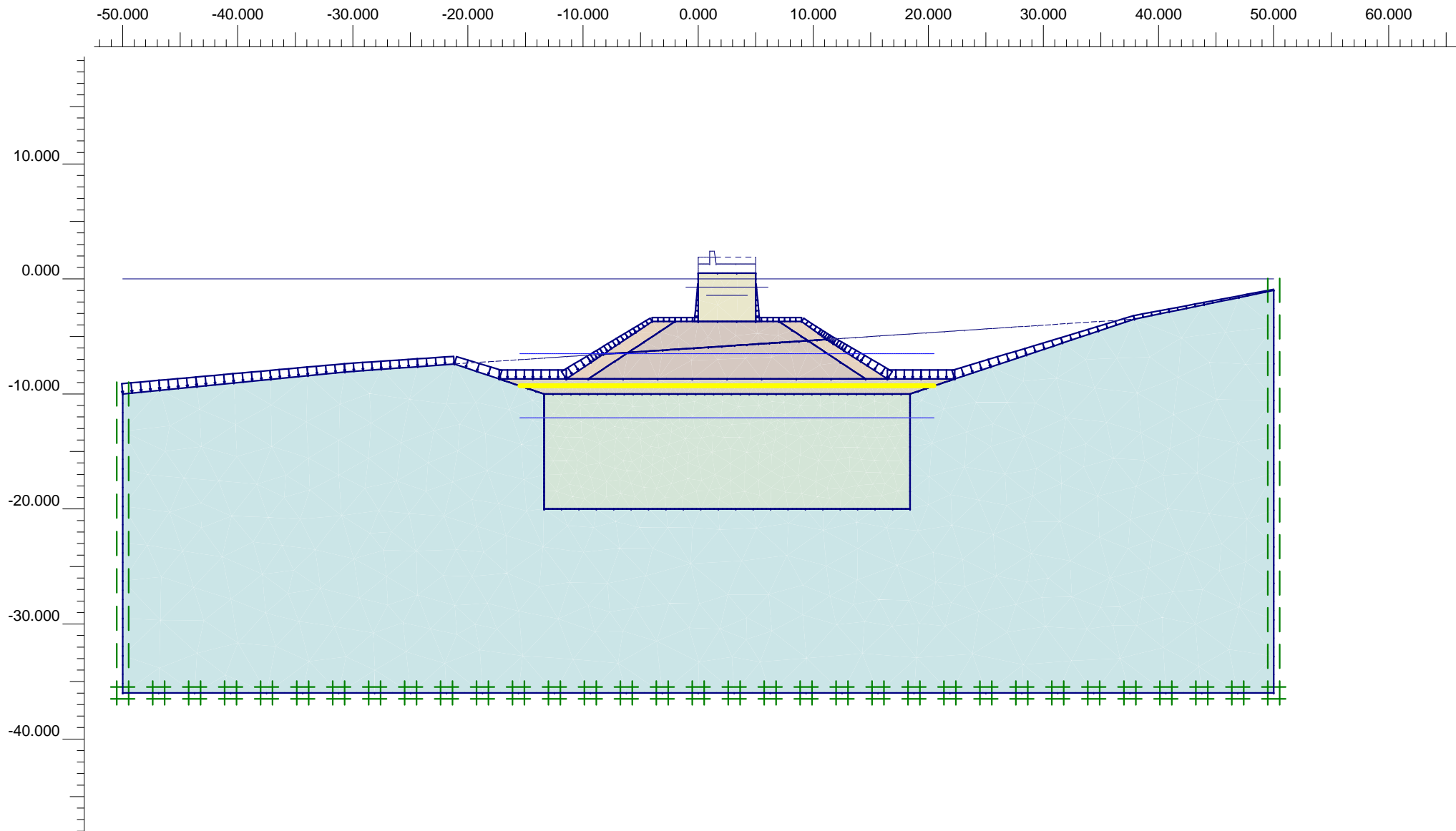
Project name : 4195-TOMH-Γ-Γ-R0

Output : TOMH-Γ-Γ-R0.028 -- Cross Section A - A* Table

Step : 28

Page : 1

X [m]	Y [m]	U _y [10 ⁻³ m]
0.001	-3.702	-197.315
1.665	-3.702	-198.445
1.665	-3.702	-198.445
1.667	-3.702	-198.446
1.667	-3.702	-198.446
1.669	-3.702	-198.445
1.669	-3.702	-198.445
3.333	-3.702	-196.685
3.333	-3.702	-196.685
3.337	-3.702	-196.679
3.337	-3.702	-196.679
5.000	-3.702	-192.070



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Project description

ΦΑΣΗ 6: ΑΠΟΜΑΚΡΥΝΣΗ Τ.Ο. ΕΠΙΦΟΡΤΙΣΗΣ

Project name

4195-ΤΟΜΗ-Γ-Γ...

Step

35

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 6: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 35

Page : 1

Step info

Step : 35 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.594
0.073

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.971
Active proportion of stage	Mstage :	0.010	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 6: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 35

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

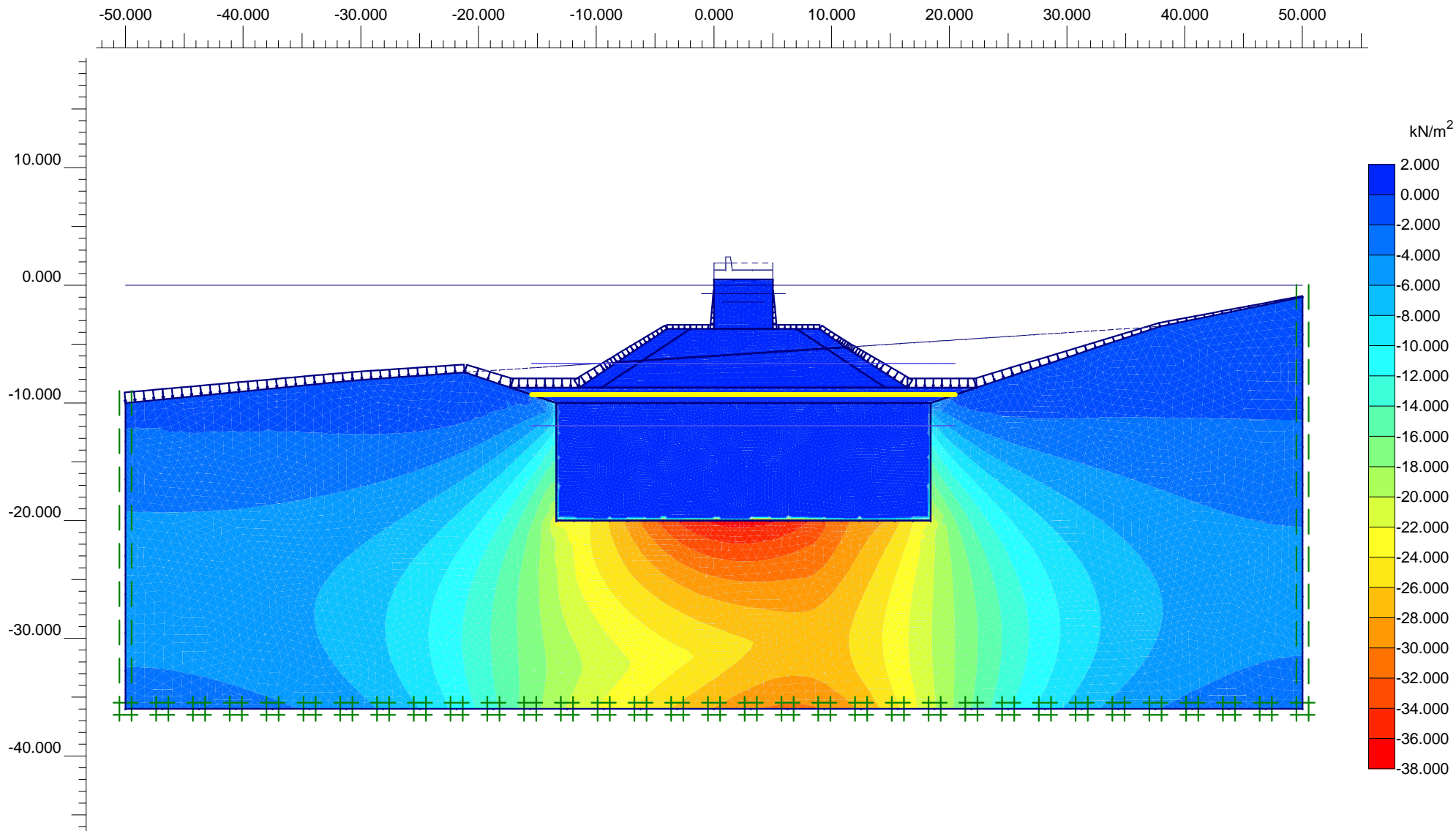
ForceX : 0.000 kN/m
ForceY : 0.000 kN/m

Consolidation

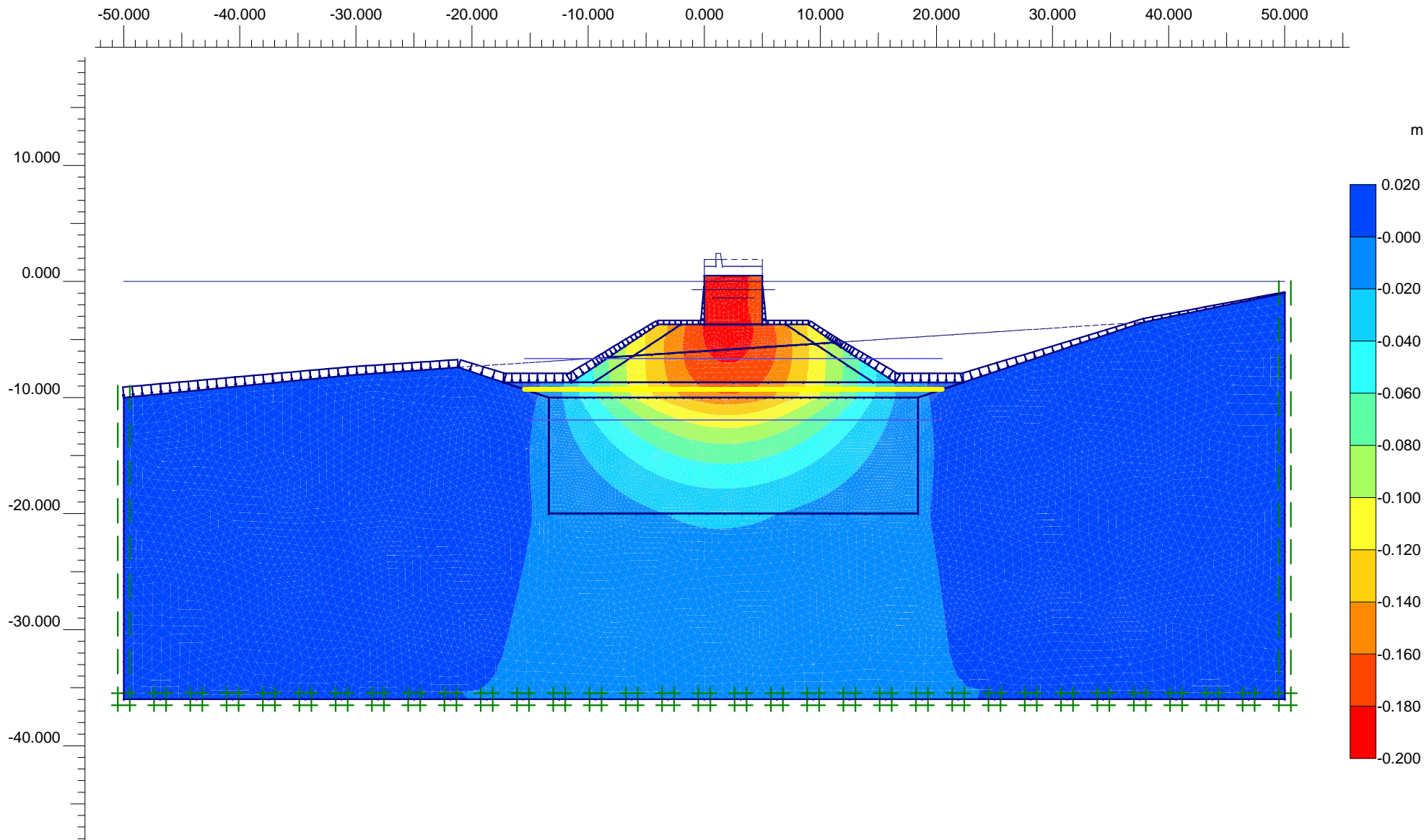
Realized Pmax : 36.816 kN/m²

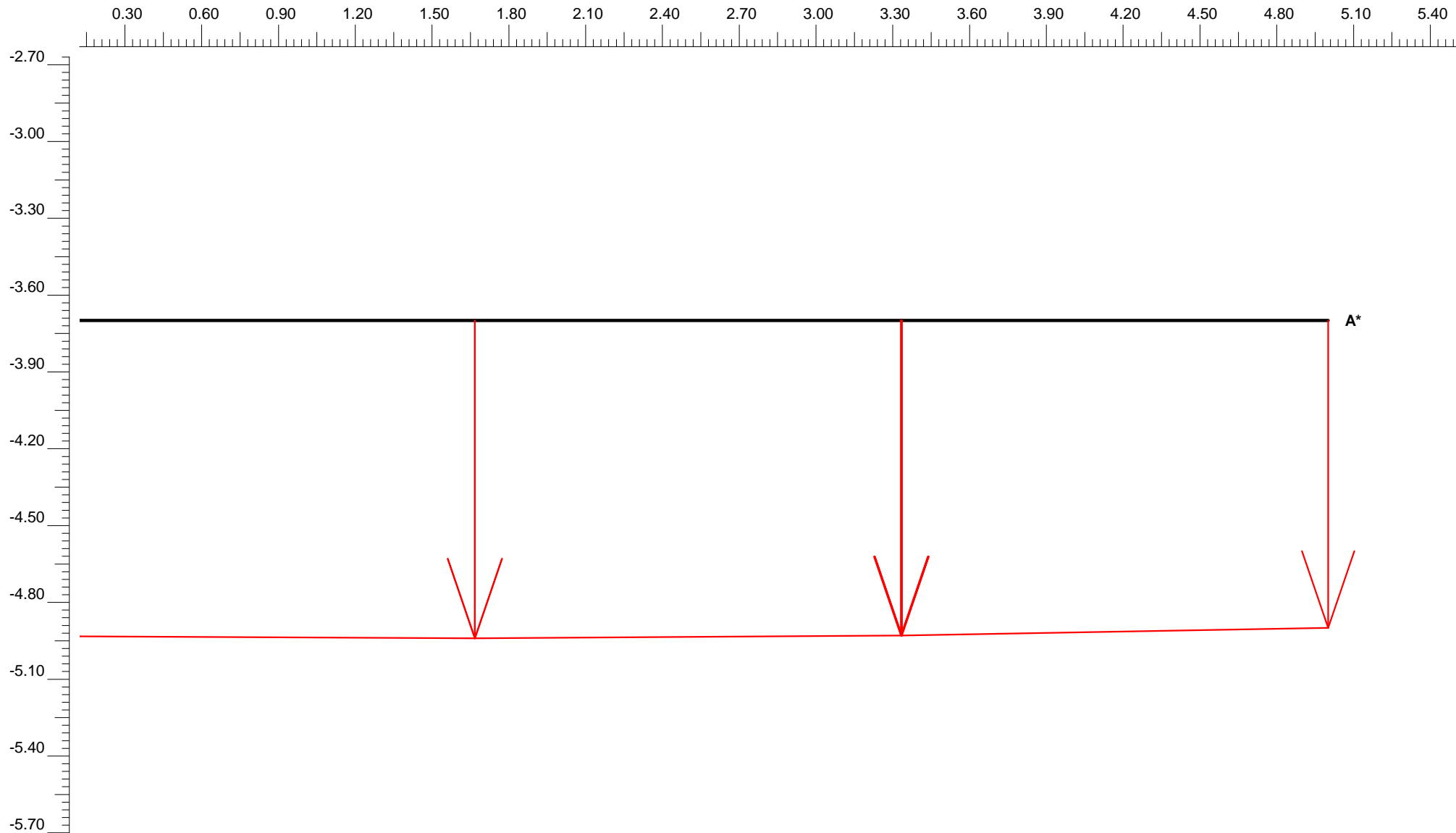
PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.000	222	1	35	10	0	0	0
2	0.000	219	1	19	12	0	0	0



Excess pore pressures
 Extreme excess pore pressure -36.96 kN/m²
 (pressure = negative)





Vertical displacements
 Extreme vertical displacement $-183.34 \cdot 10^{-3}$ m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 6: ΔΙΑΓΡΑΜΜΑ ΚΑΘΙΖΗΣΕΩΝ ΣΤΗΝ ΕΔΡΑΣΗ ΤΩΝ Τ.Ο.

Project name

4195-ΤΟΜΗ-Γ-Γ...

Step

35

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 6: ΑΠΟΤΕΛΕΣΜΑΤΑ ΚΑΘΙΖΗΣΕΩΝ ΣΤΗΝ ΕΔΡΑΣΗ ΤΩΝ Τ.Ο. ΜΕΤΑ ΤΗΝ ΑΠΟΜΑΚΡΥΝΣΗ ΤΗΣ ΕΠΙΦ.

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

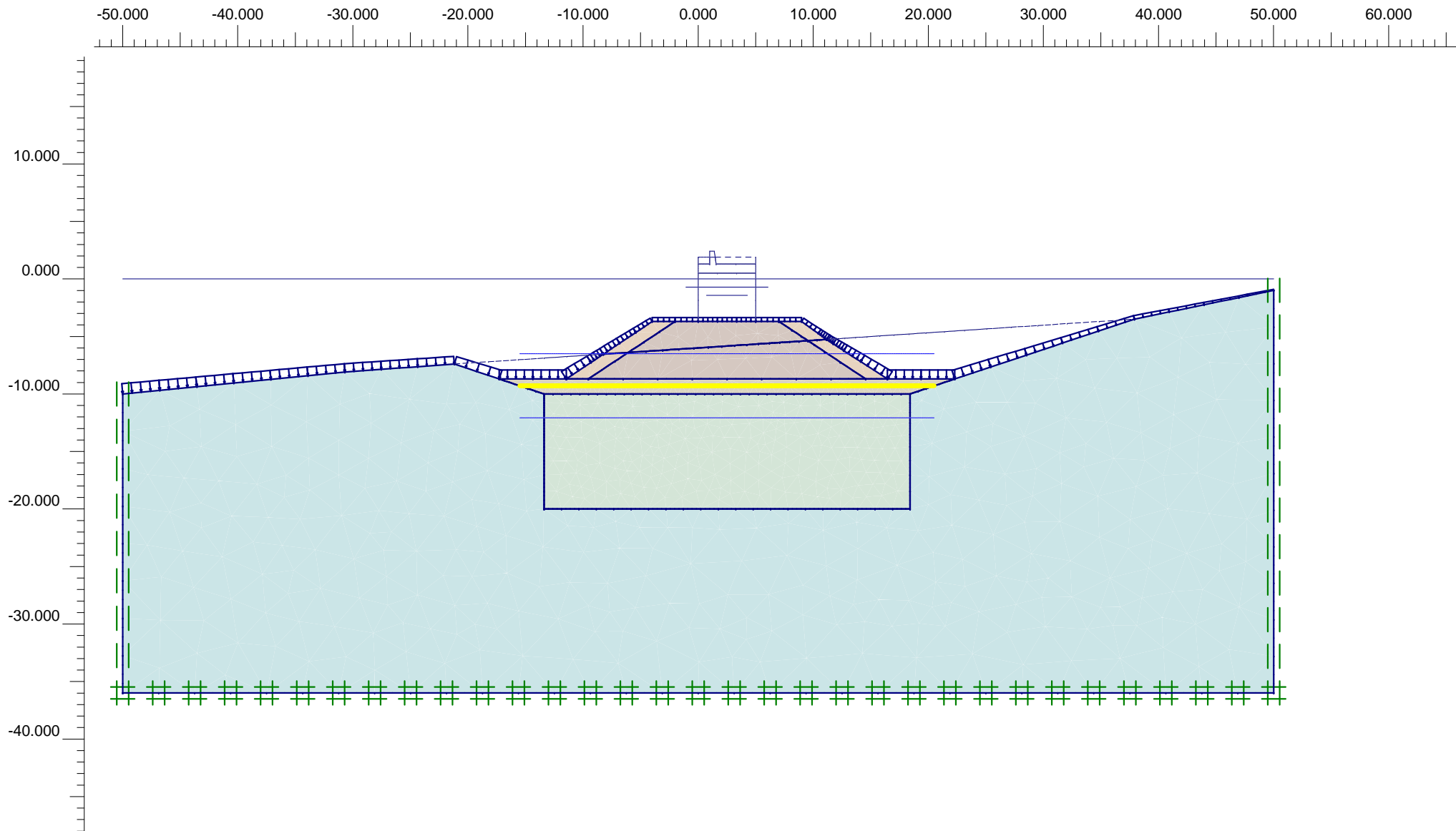
Project name : 4195-TOMH-Γ-Γ-R0

Output : TOMH-Γ-Γ-R0.035 -- Cross Section A - A* Table

Step : 35

Page : 1

X [m]	Y [m]	U _y [10 ⁻³ m]
0.002	-3.699	-182.102
1.667	-3.699	-183.345
1.667	-3.699	-183.345
3.332	-3.699	-181.715
3.332	-3.699	-181.715
3.333	-3.699	-181.712
3.333	-3.699	-181.712
3.335	-3.699	-181.710
3.335	-3.699	-181.710
5.000	-3.699	-177.247



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 7: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 46

Page : 1

Step info

Step : 46 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.741
0.459

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.964
Active proportion of stage	Mstage :	0.178	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 7: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 46

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

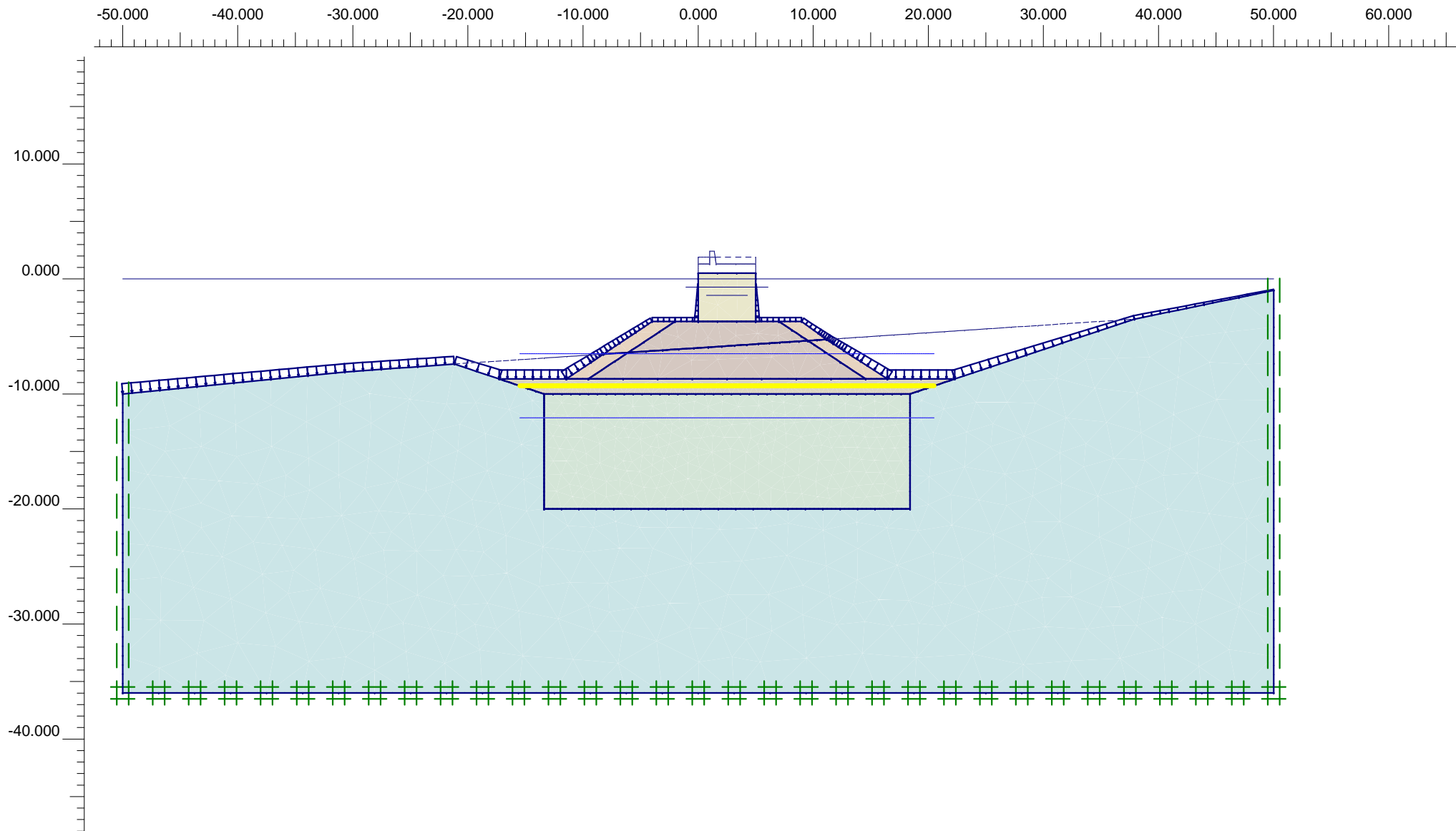
ForceX : 0.000 kN/m
ForceY : 0.000 kN/m

Consolidation

Realized Pmax : 0.000 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.002	10086	8221	128	42	0	0	0
2	0.002	10074	8215	238	42	0	0	0



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Project description

ΦΑΣΗ 8: ΤΟΠΟΘΕΤΗΣΗ Τ.Ο. (ΣΤΡΑΓΓΙΖΟΜΕΝΕΣ)

Project name

4195-ΤΟΜΗ-Γ-Γ...

Step

49

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 8: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 49

Page : 1

Step info

Step : 49 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.133
0.104

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.971
Active proportion of stage	Mstage :	0.040	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 8: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 49

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

Consolidation

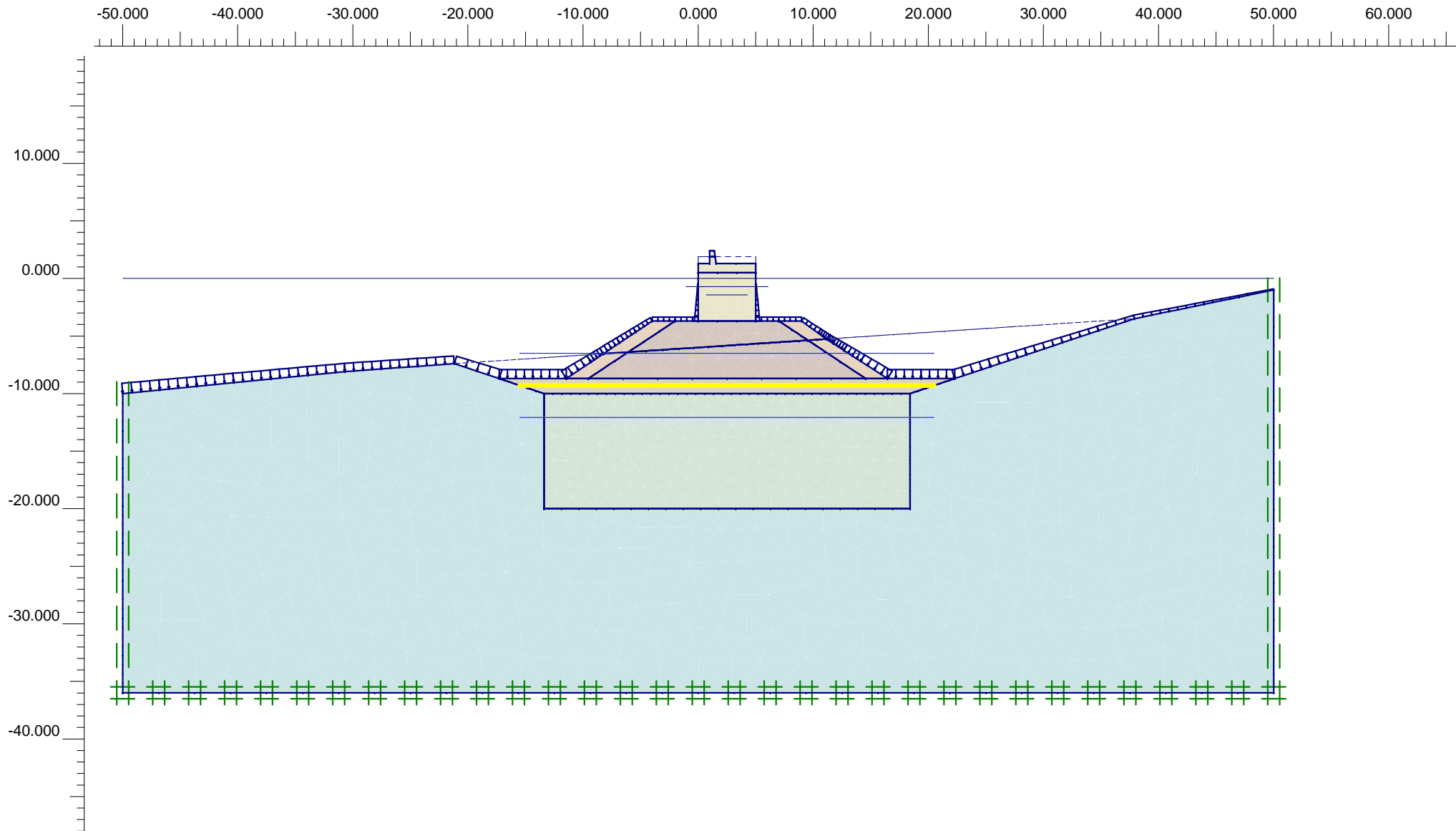
ForceX : 0.000 kN/m

Realized Pmax : 0.000 kN/m²

ForceY : 0.000 kN/m

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.001	9884	8611	386	94	48	0	0
2	0.001	9711	8478	143	92	0	0	0



Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 9: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 52

Page : 1

Step info

Step : 52 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.251
0.112

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.972
Active proportion of stage	Mstage :	0.043	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 9: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 52

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

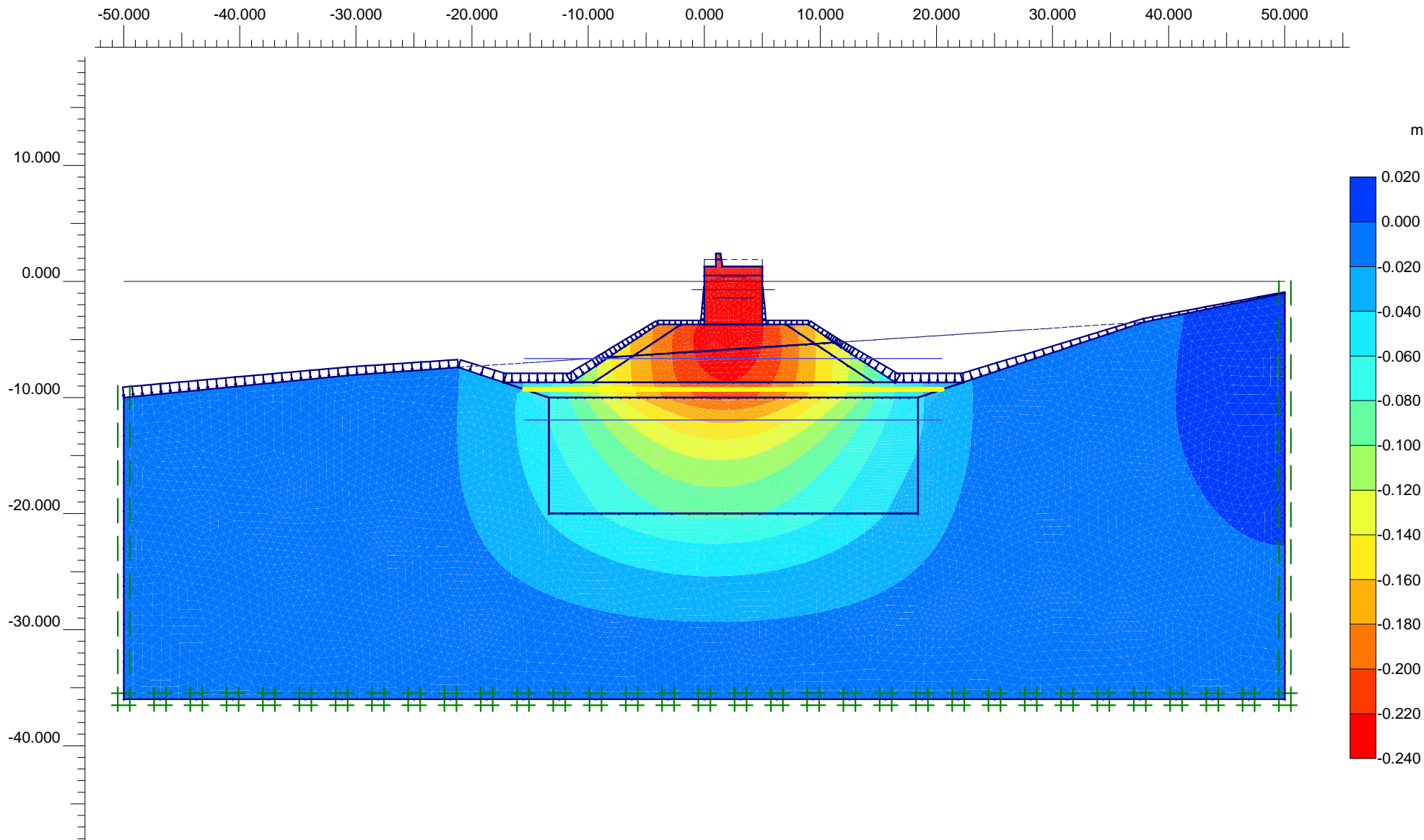
ForceX : 0.000 kN/m
ForceY : 0.000 kN/m

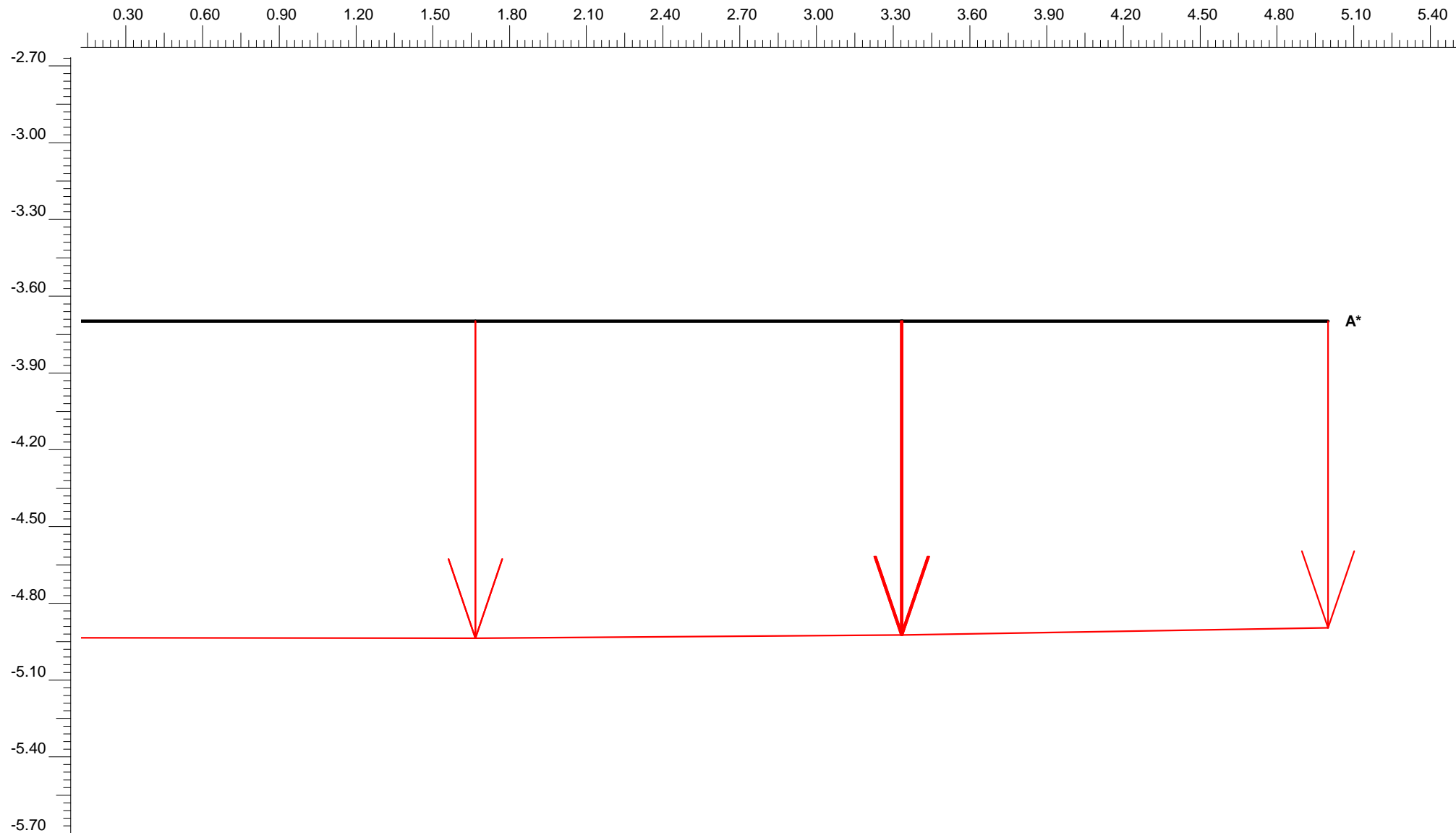
Consolidation

Realized Pmax : 0.000 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.001	10340	8755	453	111	29	0	0
2	0.001	10121	8580	165	110	0	0	0





Vertical displacements
 Extreme vertical displacement -230.19×10^{-3} m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 9: ΔΙΑΓΡΑΜΜΑ ΣΥΝΟΛΙΚΩΝ ΚΑΘΙΖΗΣΕΩΝ ΕΔΡΑΣΗΣ Τ.Ο.

Project name

4195-ΤΟΜΗ-Γ-Γ...

Step

52

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 9: ΑΠΟΤΕΛΕΣΜΑΤΑ ΣΥΝΟΛΙΚΩΝ (ΑΜΕΣΩΝ + ΜΑΚΡΟΧΡΟΝΙΩΝ) ΚΑΘΙΖΗΣΕΩΝ - ΕΔΡΑΣΗ Τ.Ο.

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

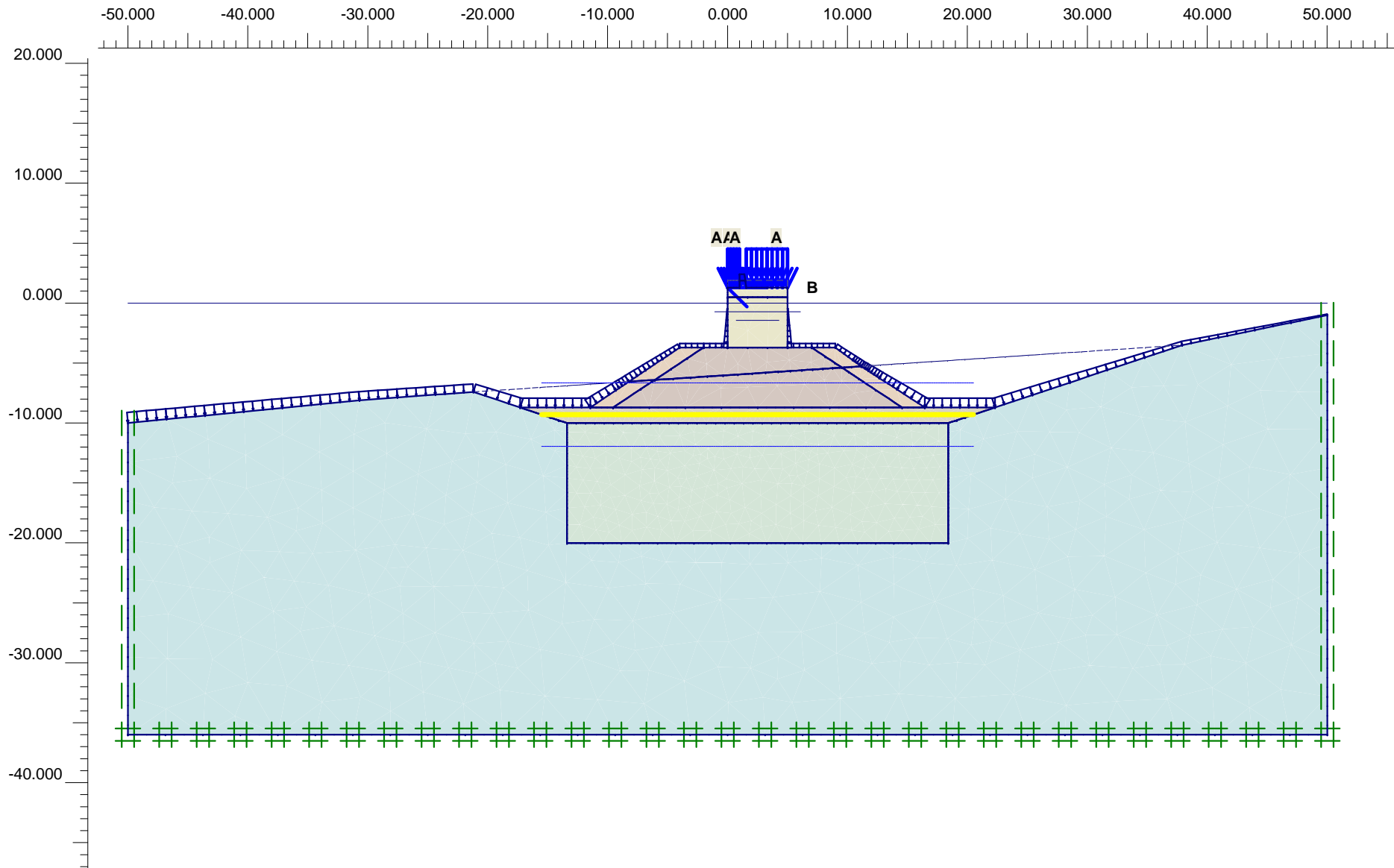
Project name : 4195-TOMH-Γ-Γ-R0

Output : TOMH-Γ-Γ-R0.052 -- Cross Section A - A* Table

Step : 52

Page : 1

X [m]	Y [m]	U _y [10 ⁻³ m]
0.001	-3.699	-229.962
1.667	-3.699	-230.190
1.667	-3.699	-230.190
3.332	-3.699	-227.837
3.332	-3.699	-227.837
3.333	-3.699	-227.835
3.333	-3.699	-227.835
3.334	-3.699	-227.833
3.334	-3.699	-227.833
5.000	-3.699	-222.692



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 10: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 55

Page : 1

Step info

Step : 55 of 55
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.194
0.080

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements
Contraction tunnel A
Contraction tunnel B
Load system A
Load system B
Soil weight
Acceleration
Strength reduction factor
Time

Mdisp: 0.000
McontrA: 0.000
McontrB: 0.000
MloadA: 0.303
MloadB: 0.303
Mweight: 0.000
Maccel: 0.000
Msf: 0.000
Increment: 0.000

Σ-Mdisp: 0.000
Σ-McontrA: 0.000
Σ-McontrB: 0.000
Σ-MloadA: 5.000
Σ-MloadB: 5.000
Σ-Mweight: 1.000
Σ-Maccel: 0.000
Σ-Msf: 1.000
End time: 0.000

Staged construction

Active proportion total area
Active proportion of stage

Marea : 0.000
Mstage : 0.000

ΣMarea : 0.972
ΣMstage : 0.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 10: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

Output : Calculation information

Step : 55

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

Consolidation

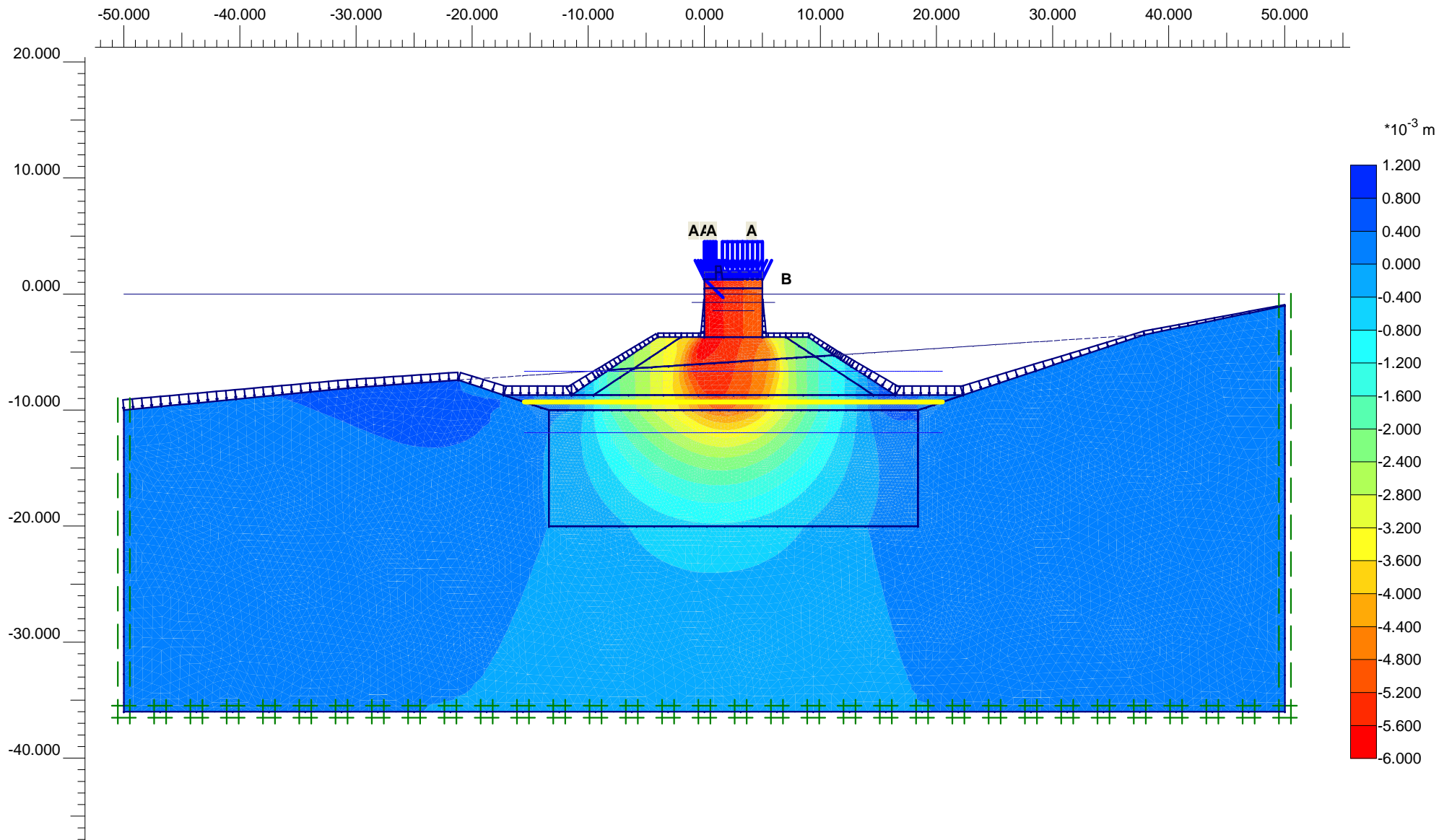
ForceX : 0.000 kN/m

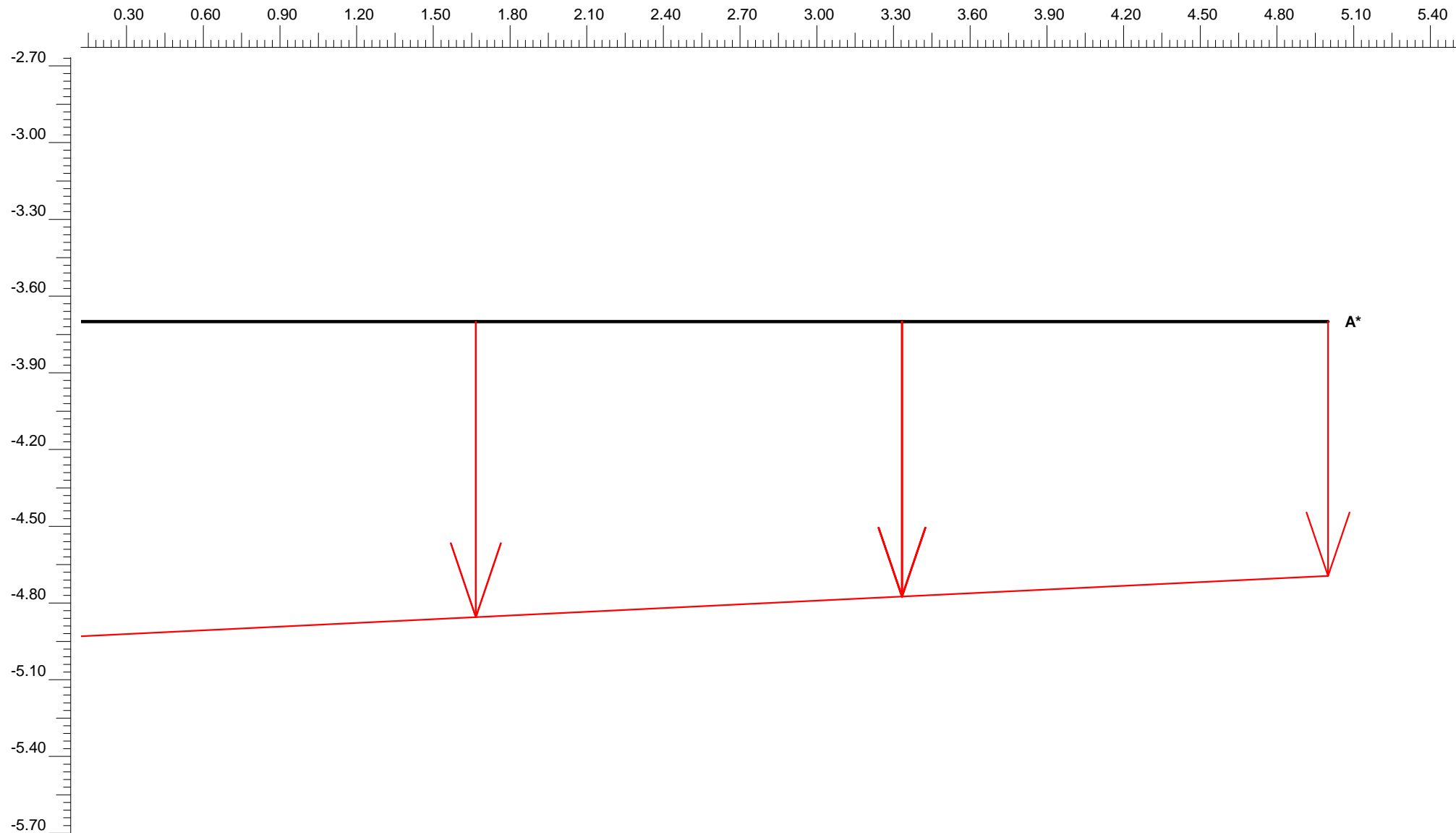
ForceY : 0.000 kN/m

Realized Pmax : 0.983 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.009	8621	7386	220	107	5	0	0
2	0.009	7834	6702	115	106	0	0	0





Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 10: ΑΠΟΤΕΛΕΣΜΑΤΑ ΠΡΟΣΘΕΤΩΝ ΚΑΘΙΖΗΣΕΩΝ ΣΤΗΝ ΕΔΡΑΣΗ ΤΩΝ Τ.Ο. ΛΟΓΩ ΚΙΝΗΤΩΝ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-Γ-Γ-R0

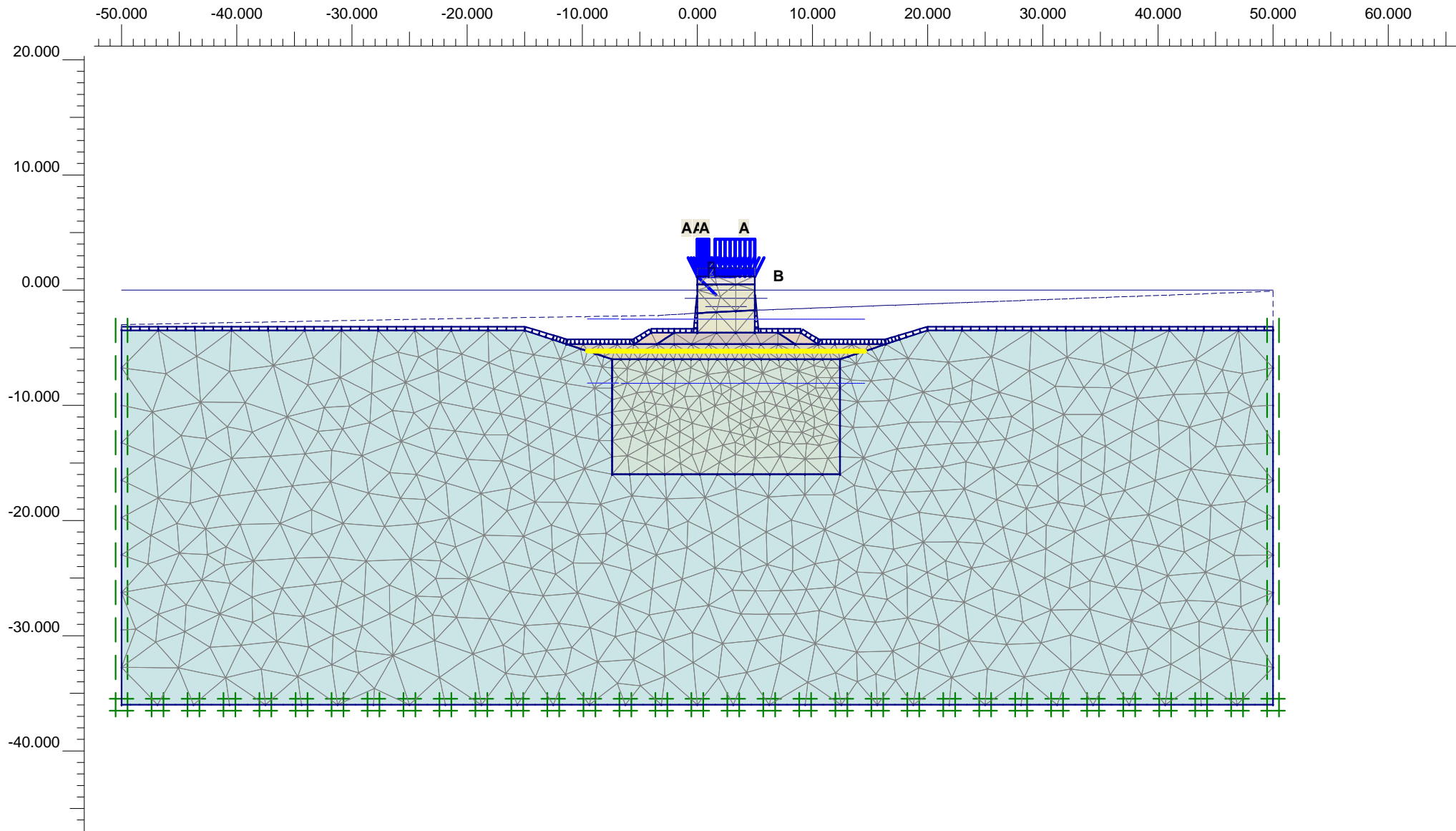
Output : TOMH-Γ-Γ-R0.055 -- Cross Section A - A* Table

Step : 55

Page : 1

X [m]	Y [m]	U _y [10 ⁻³ m]
0.001	-3.699	-5.987
1.667	-3.699	-5.597
1.667	-3.699	-5.597
3.332	-3.699	-5.207
3.332	-3.699	-5.207
3.333	-3.699	-5.206
3.333	-3.699	-5.206
3.334	-3.699	-5.206
3.334	-3.699	-5.206
5.000	-3.699	-4.816

ΔΙΑΤΟΜΗ ΕΛΕΓΧΟΥ Α-Α



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m

PLAXIS
 Finite Element Code for Soil and Rock Analyses

Project description

ΦΟΡΕΑΣ ΠΕΠΕΡΑΣΜΕΝΩΝ ΣΤΟΙΧΕΙΩΝ

Project name

4195-TOMH-A-A...

Step

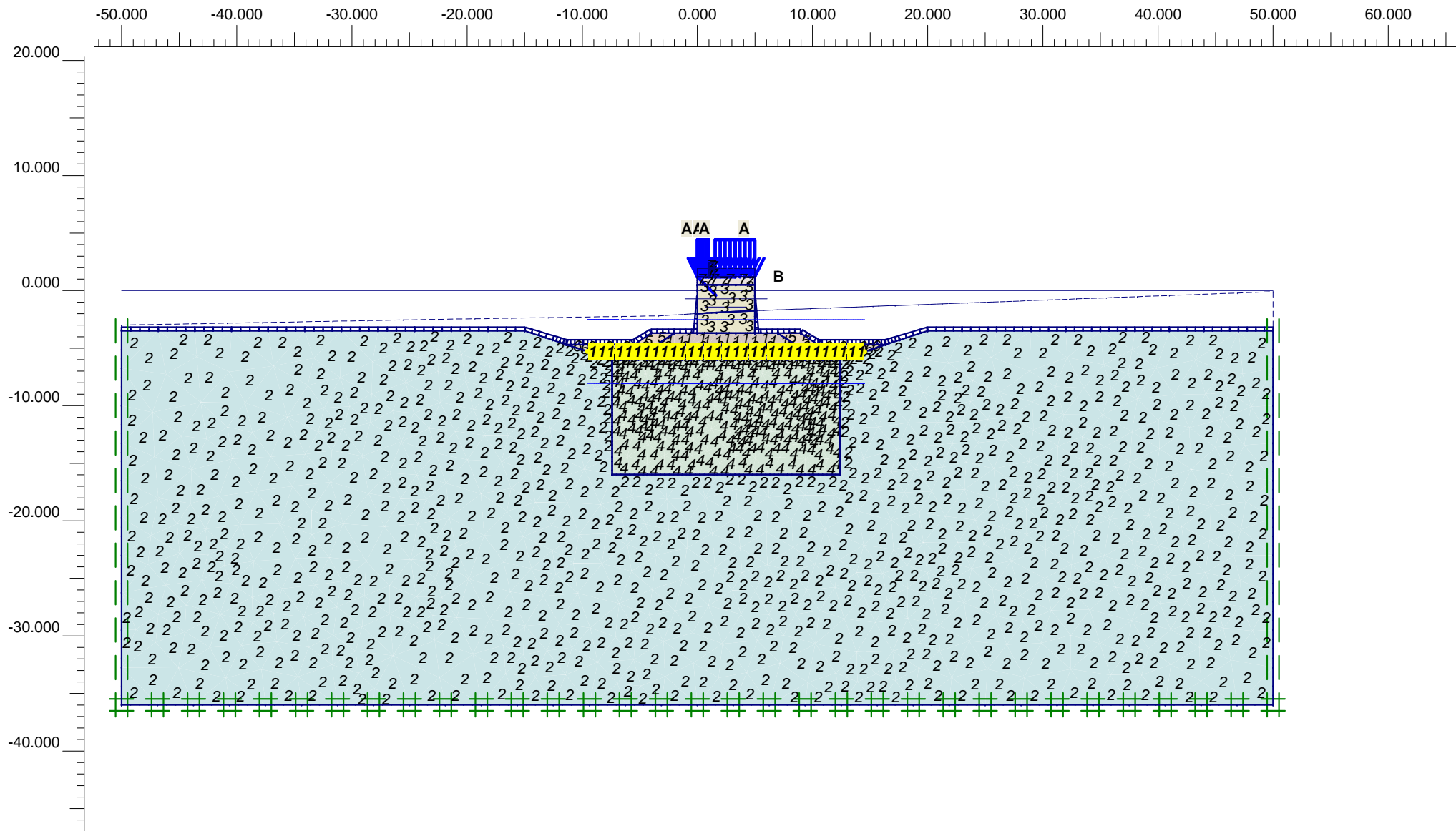
44

Date

19/10/23

User name

Triton Consulting Engineers Ltd.



Flow Field

Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m

PLAXIS

Finite Element Code for Soil and Rock Analyses

Project description

ΕΔΑΦΙΚΕΣ ΣΤΡΩΣΕΙΣ ΚΑΙ ΛΟΙΠΑ ΥΛΙΚΑ ΠΡΟΣΟΜΟΙΩΜΑΤΟΣ

Project name

4195-TOMH-A-A...

Step

44

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΓΕΩΤΕΧΝΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΣΤΡΩΣΕΩΝ ΠΥΘΜΕΝΑ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Soil and Interfaces Info - Hardening Soil

Step : 44

Page : 1

Number	Identification	Type	γ_{dry} [kN/m ³]	γ_{wet} [kN/m ³]	k_x [m/day]	k_y [m/day]	E_{50}^{ref} [kN/m ²]	$E_{\text{oed}}^{\text{ref}}$ [kN/m ²]	$E_{\text{ur}}^{\text{ref}}$ [kN/m ²]	c_{ref} [kN/m ²]
2	Layer I	Undrained	19.0	19.0	2.8000E-5	1.4000E-5	3400.0	3000.0	10200.0	2.0
4	Layer I + Stone columns	Drained	19.3	19.3	0.0050	0.0050	6800.0	6000.0	20400.0	1.7

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΓΕΩΤΕΧΝΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΕΔΑΦΙΚΩΝ ΣΤΡΩΣΕΩΝ ΠΥΘΜΕΝΑ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Soil and Interfaces Info - Hardening Soil

Step : 44

Page : 2

Number	φ [°]	ψ [°]	v_{ur} [-]	p_{ref} [kN/m ²]	Power [-]	K_0^{nc} [-]	c_{incr} [kN/m ³]	y_{ref} [m]	C_k [-]	e_{init} [-]	e_{min} [-]
2	25.0	0.0	0.20	100	1.000	0.577	0.0	0.0	1E15	1.0	0.0
4	32.0	0.0	0.20	100	1.000	0.470	0.0	0.0	1E15	1.0	0.0

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΓΕΩΤΕΧΝΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΕΔΑΦΙΚΩΝ ΣΤΡΩΣΕΩΝ ΠΥΘΜΕΝΑ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Soil and Interfaces Info - Hardening Soil

Step : 44

Page : 3

Number	e_{\max} [-]	R_f [-]	T-Strength [kN/m ²]	R_{inter} [-]	Interface Permeability [-]	$\delta_{\text{-inter}}$ [m]
2	999.0	0.90	0.0	1.00	Neutral	0.000
4	999.0	0.90	0.0	1.00	Neutral	0.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΕΔΑΦΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΓΕΩΥΛΙΚΩΝ ΚΑΙ ΛΟΙΠΩΝ ΥΛΙΚΩΝ ΠΟΥ ΔΟΜΟΥΝ ΤΟ ΣΩΜΑ ΤΟΥ ΕΡΓΟΥ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Soil and Interfaces Info - Mohr-Coulomb

Step : 44

Page : 1

Number	Identification	Type	γ_{dry} [kN/m ³]	γ_{wet} [kN/m ³]	k_x [m/day]	k_y [m/day]	ν [-]	E_{ref} [kN/m ²]	c_{ref} [kN/m ²]	ϕ [°]
1	Crushed stone	Drained	21.0	21.0	10.0000	10.0000	0.25	41667.0	1.0	43.0
3	Concrete Blocks	Drained	23.5	23.5	1.0000E-7	1.0000E-7	0.20	3E7	1E3	45.0
5	Armor stone	Drained	18.0	18.0	100.0000	100.0000	0.25	83333.0	5.0	43.0
6	Sand gravel	Drained	21.0	21.0	0.1000	0.1000	0.30	22286.0	0.5	36.0
7	Concrete Cope	Drained	48.0	48.0	1.0000E-7	1.0000E-7	0.20	3E7	1E3	45.0

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΕΔΑΦΙΚΕΣ ΠΑΡΑΜΕΤΡΟΙ ΓΕΩΥΛΙΚΩΝ ΚΑΙ ΛΟΙΠΩΝ ΥΛΙΚΩΝ ΠΟΥ ΔΟΜΟΥΝ ΤΟ ΣΩΜΑ ΤΟΥ ΕΡΓΟΥ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Soil and Interfaces Info - Mohr-Coulomb

Step : 44

Page : 2

Number	ψ [°]	E_{incr} [kN/m ³]	c_{incr} [kN/m ³]	y_{ref} [m]	C_k [-]	e_{init} [-]	T-Strength [kN/m ²]	R_{inter} [-]	Interface Permeability [-]
1	0.0	0.0	0.0	0.0	1E15	1.0	0.0	1.00	Neutral
3	0.0	0.0	0.0	0.0	1E15	1.0	0.0	1.00	Neutral
5	0.0	0.0	0.0	0.0	1E15	1.0	0.0	1.00	Neutral
6	0.0	0.0	0.0	0.0	1E15	1.0	0.0	0.80	Neutral
7	0.0	0.0	0.0	0.0	1E15	1.0	0.0	1.00	Neutral

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΠΑΡΑΜΕΤΡΟΙ ΓΕΩΥΦΑΣΜΑΤΟΣ ΟΝΟΜΑΣΤΙΚΗΣ ΕΦΕΛΚΥΣΤΙΚΗΣ ΑΝΤΟΧΗΣ 600 kN/m

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Material data sets - Geotextiles

Step : 44

Page : 1

Number	Identification	EA [kN/m]	ν [-]
1	600 kN/m	5E3	0.00

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΣΤΑΔΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0.plx

Output : Calculations list

Page : 1

Identification	Phase No.	Start from	Calculation	Loading input	First	Last
Initial phase	0	N/A	N/A	N/A		
Αρχική κατάσταση	1	0	Plastic	Total multipliers	1	2
Εκσκαφή πυθμένα	2	1	Plastic	Staged construction	3	8
Κατασκευή χαλικοπασσάλων και εξυγιαντικής στρώσης	3	2	Plastic	Staged construction	9	15
Κατασκευή πρίσματος έδρασης (αστράγγιστες συνθήκες)	4	3	Plastic	Staged construction	16	17
Ολοκλήρωση Α' Φάσης Κατασκευής: Τοποθέτηση - επιφόρτιση Τ.Ο. (αστράγγιστες συνθήκες)	5	4	Plastic	Staged construction	18	21
Απομάκρυνση Τ.Ο. επιφόρτισης (στραγγιζόμενες συνθήκες)	6	5	Plastic	Staged construction	22	28
Κατασκευή πρίσματος έδρασης (στραγγιζόμενες συνθήκες)	7	3	Plastic	Staged construction	29	32
Τοποθέτηση Τ.Ο. (στραγγιζόμενες συνθήκες)	8	7	Plastic	Staged construction	33	38
Κατασκευή ανωδομής (στραγγιζόμενες συνθήκες)	9	8	Plastic	Staged construction	39	41
Επιβολή κινητών	10	9	Plastic	Total multipliers	42	44

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description	: ΣΤΑΔΙΑ ΑΝΑΛΥΣΗΣ	Date : 19/10/2023
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Date : 19/10/2023

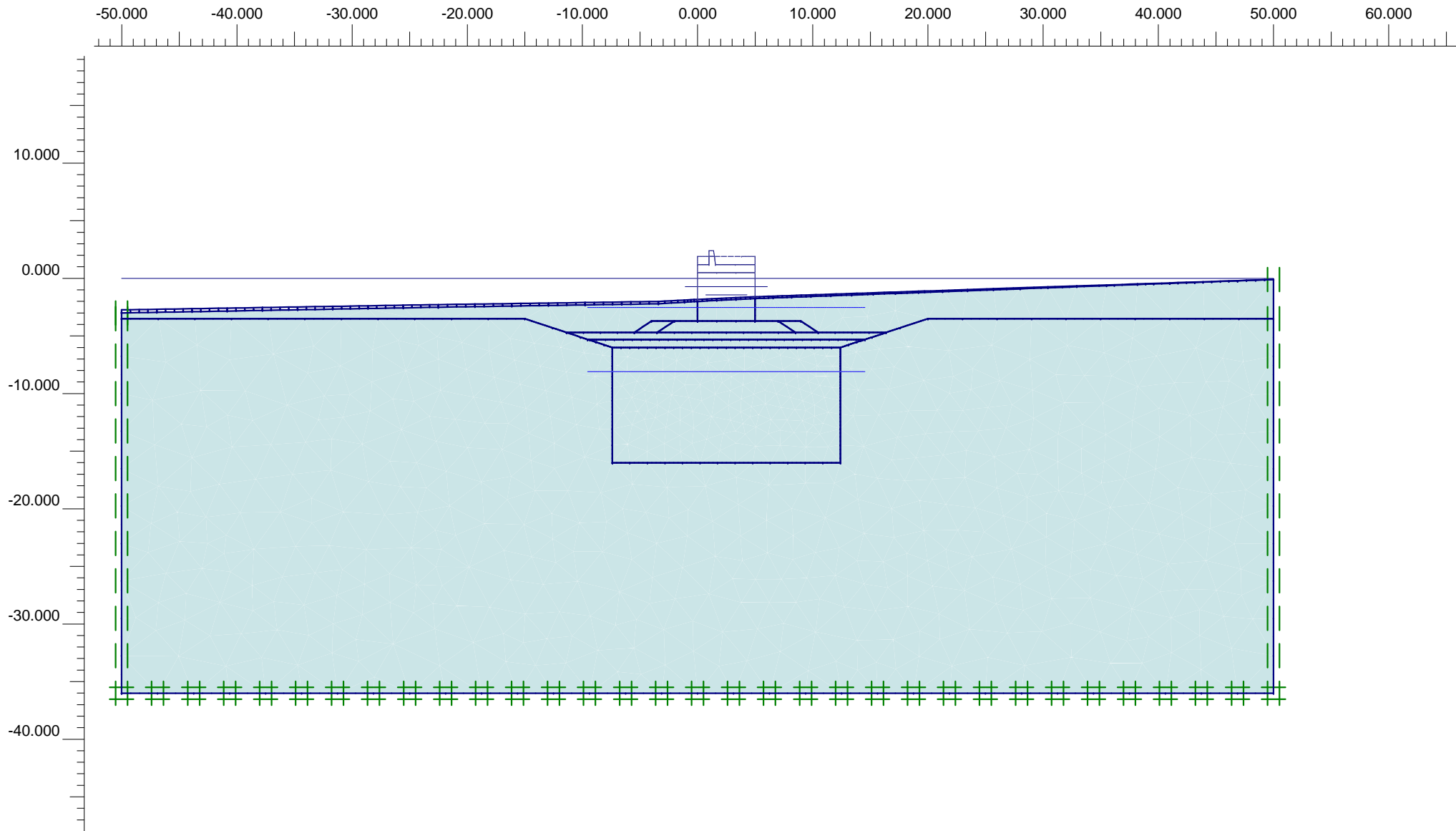
User name : Triton Consulting Engineers Ltd.

Project name	: 4195-TOMH-A-A-R0.plx
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Output : Calculations list Page : 2

Page : 2

[illegible]



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Finite Element Code for Soil and Rock Analyses

Version 7.2.9.147

Project description

ΦΑΣΗ 1: ΑΡΧΙΚΗ ΚΑΤΑΣΤΑΣΗ

Project name

4195-TOMH-A-A...

Step

2

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 1: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Calculation information

Step : 2

Page : 1

Step info

Step : 2 of 44
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.000
1.000

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements
Contraction tunnel A
Contraction tunnel B
Load system A
Load system B
Soil weight
Acceleration
Strength reduction factor
Time

Mdisp: 0.000
McontrA: 0.000
McontrB: 0.000
MloadA: 0.000
MloadB: 0.000
Mweight: 0.000
Maccel: 0.000
Msf: 0.000
Increment: 0.000

Σ-Mdisp: 0.000
Σ-McontrA: 0.000
Σ-McontrB: 0.000
Σ-MloadA: 0.000
Σ-MloadB: 0.000
Σ-Mweight: 1.000
Σ-Maccel: 0.000
Σ-Msf: 1.000
End time: 0.000

Staged construction

Active proportion total area
Active proportion of stage

Marea : 0.000
Mstage : 0.000

ΣMarea : 0.994
ΣMstage : 0.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 1: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Calculation information

Step : 2

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

Consolidation

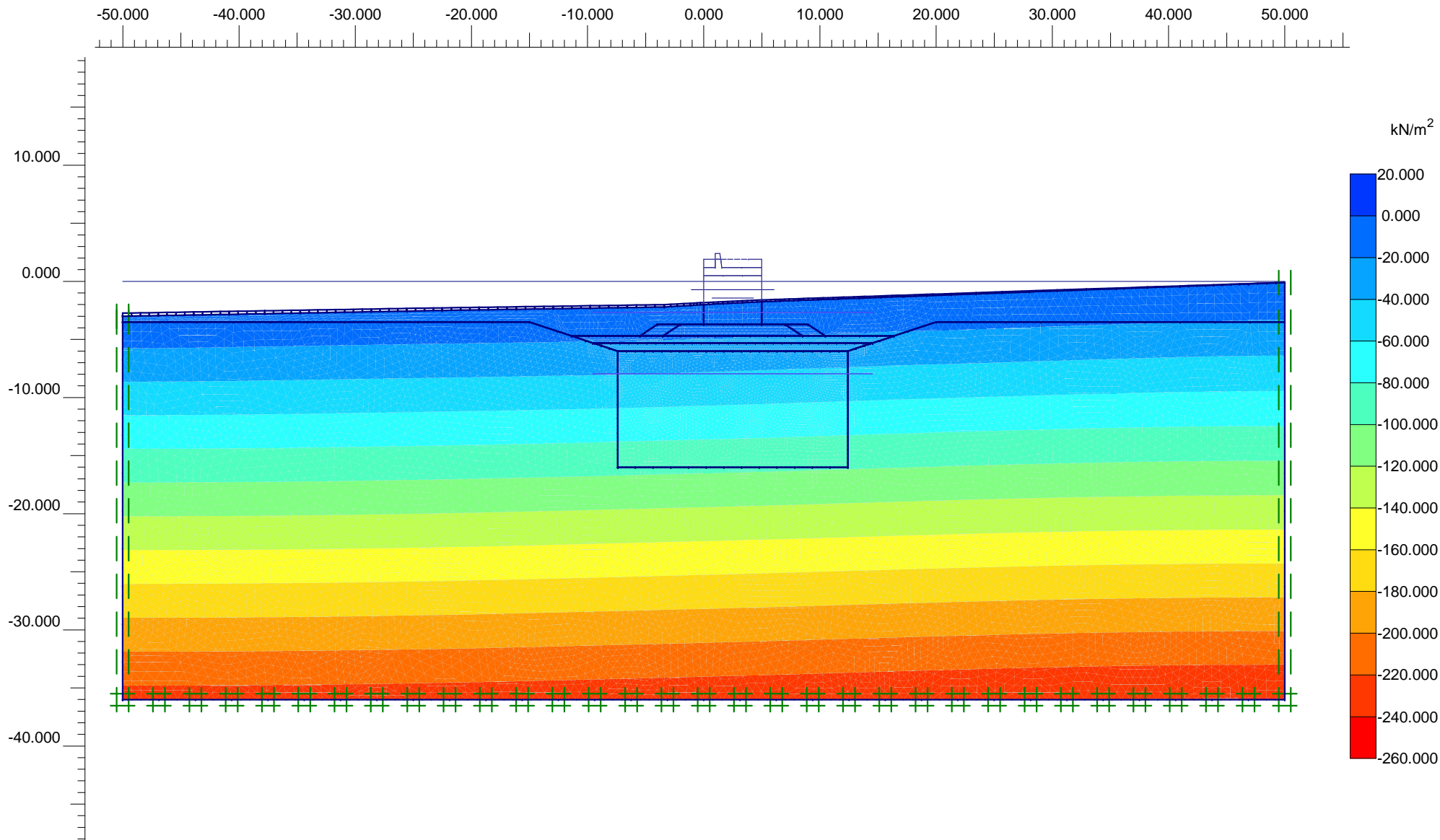
ForceX : 0.000 kN/m

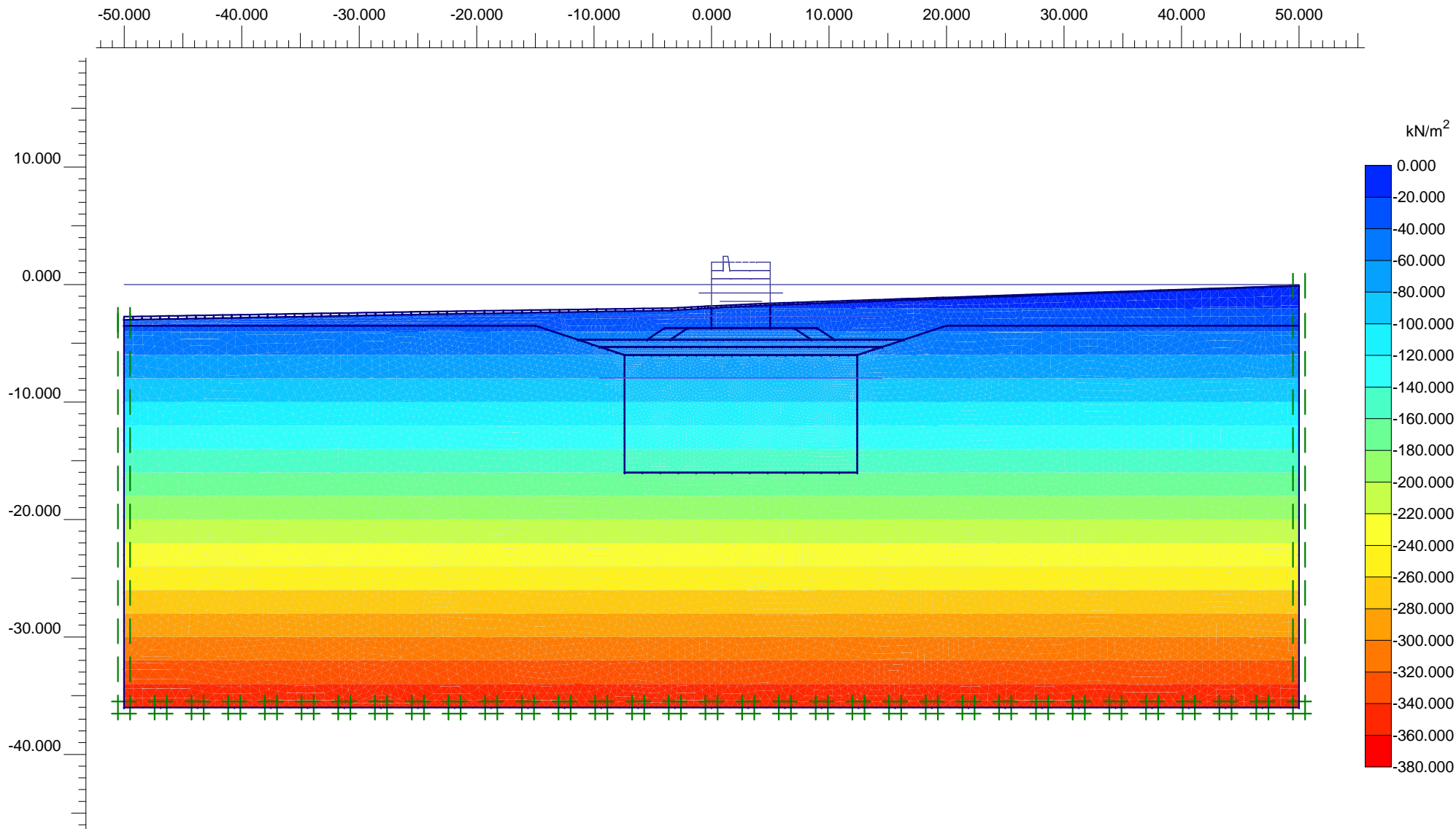
Realized Pmax : 0.000 kN/m²

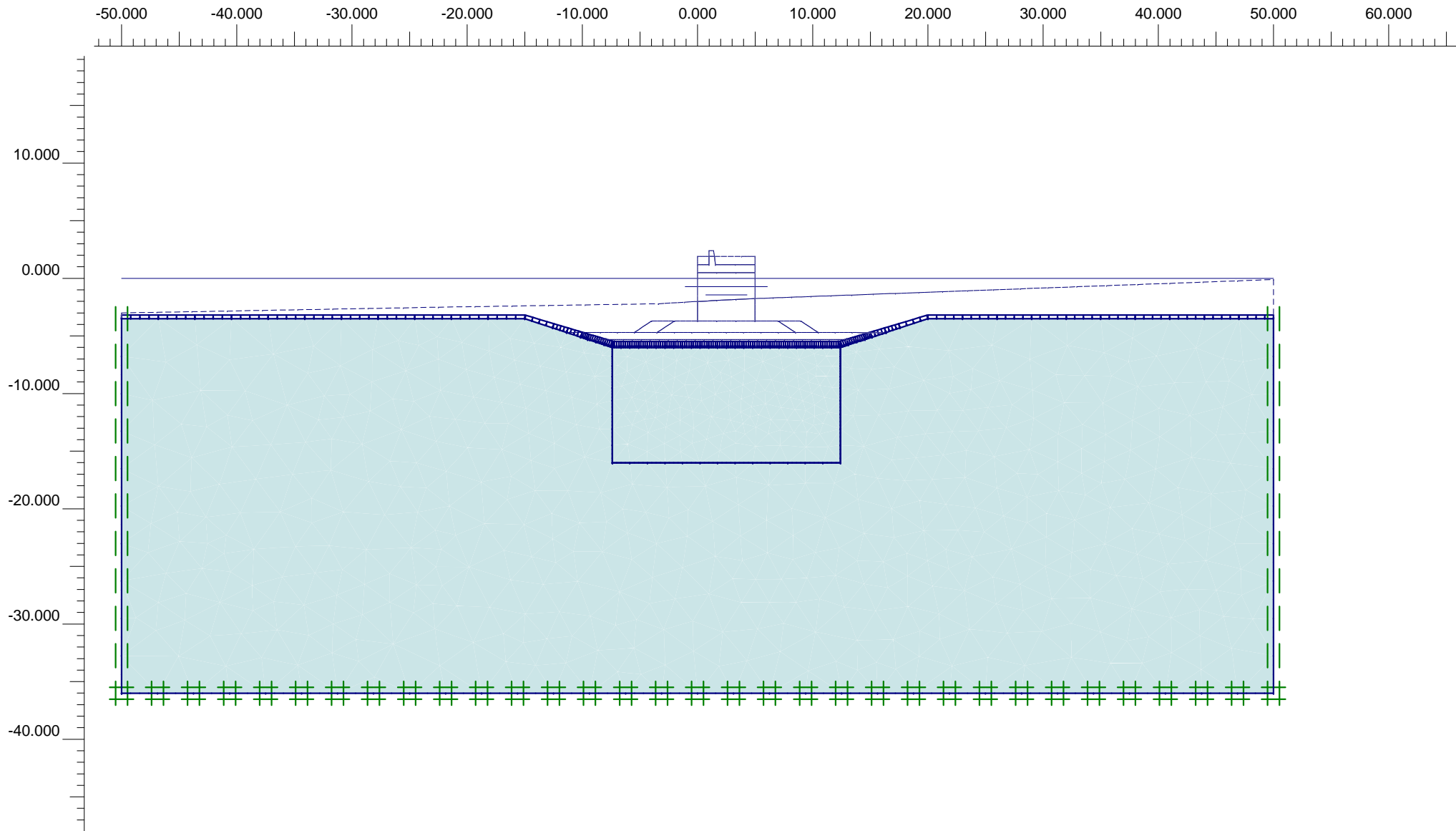
ForceY : 0.000 kN/m

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.005	15968	15968	289	0	0	0	0
2	0.003	16078	16078	43	0	0	0	0
3	0.008	16099	16099	652	0	0	0	0
4	0.003	16267	16267	38	0	0	0	0







Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Project description

ΦΑΣΗ 2: ΕΚΣΚΑΦΗ ΠΥΘΜΕΝΑ

Project name

4195-TOMH-A-A...

Step

8

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 2: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Calculation information

Step : 8

Page : 1

Step info

Step : 8 of 44
PLASTIC STEP

Extrapolation factor : 0.363
Relative stiffness : 0.434

Multipliers

	Incremental Multipliers		Total Multipliers	
Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.925
Active proportion of stage	Mstage :	0.018	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 2: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Calculation information

Step : 8

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

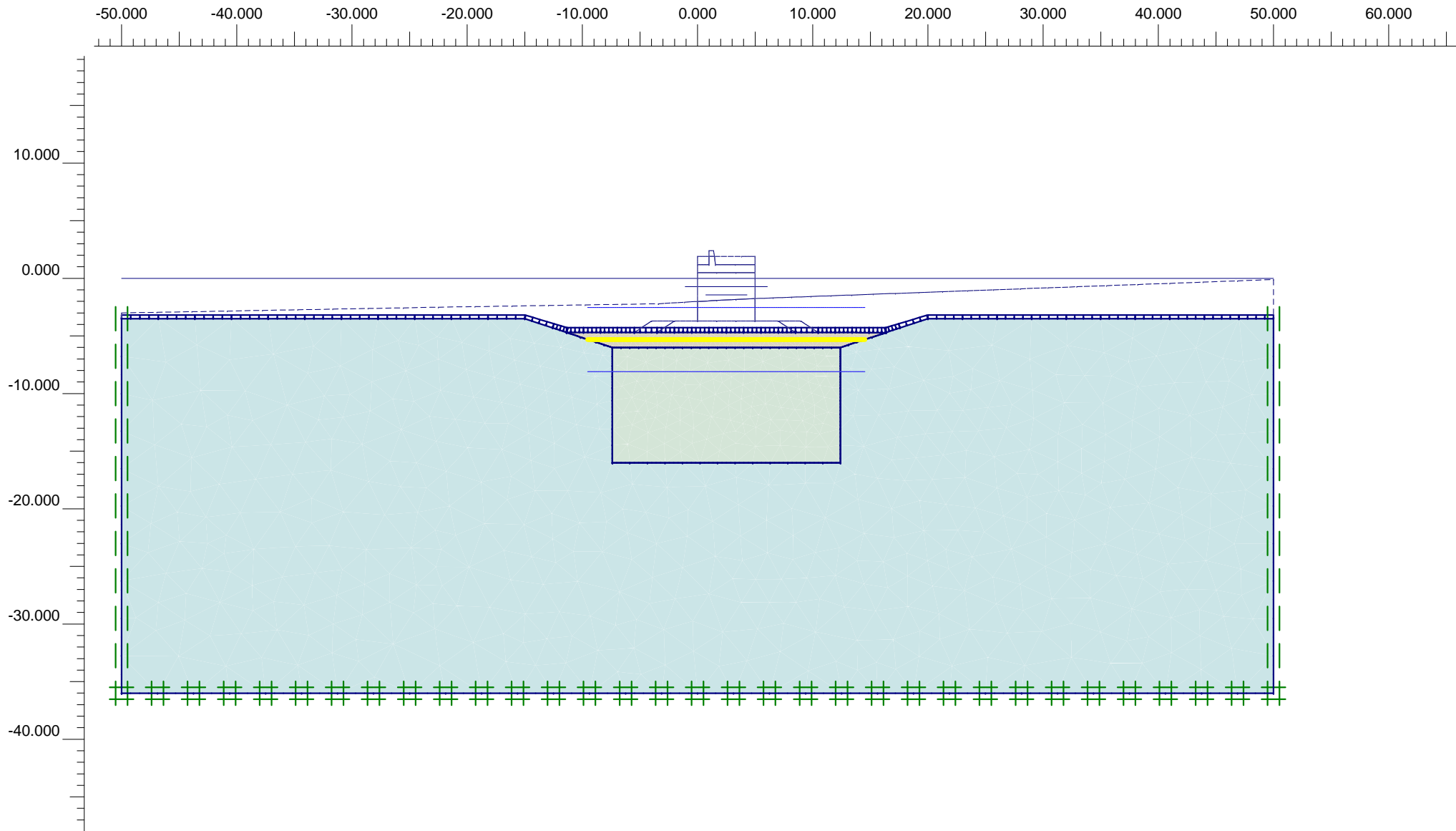
ForceX : 0.000 kN/m
ForceY : 0.000 kN/m

Consolidation

Realized Pmax : 0.000 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.000	702	702	427	0	0	0	0
2	0.000	700	700	1	0	0	0	0



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 3: ΚΑΤΑΣΚΕΥΗ Χ/Π ΚΑΙ ΕΞΥΓΙΑΝΤΙΚΗΣ ΣΤΡΩΣΗΣ

Project name

4195-TOMH-A-A...

Step

15

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 3: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Calculation information

Step : 15

Page : 1

Step info

Step : 15 of 44
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

0.797
1.007

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements	Mdisp:	0.000	Σ-Mdisp:	0.000
Contraction tunnel A	McontrA:	0.000	Σ-McontrA:	0.000
Contraction tunnel B	McontrB:	0.000	Σ-McontrB:	0.000
Load system A	MloadA:	0.000	Σ-MloadA:	0.000
Load system B	MloadB:	0.000	Σ-MloadB:	0.000
Soil weight	Mweight:	0.000	Σ-Mweight:	1.000
Acceleration	Maccel:	0.000	Σ-Maccel:	0.000
Strength reduction factor	Msf:	0.000	Σ-Msf:	1.000
Time	Increment:	0.000	End time:	0.000

Staged construction

Active proportion total area	Marea :	0.000	ΣMarea :	0.934
Active proportion of stage	Mstage :	0.242	ΣMstage :	1.000

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 3: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Calculation information

Step : 15

Page : 2

Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

Forces

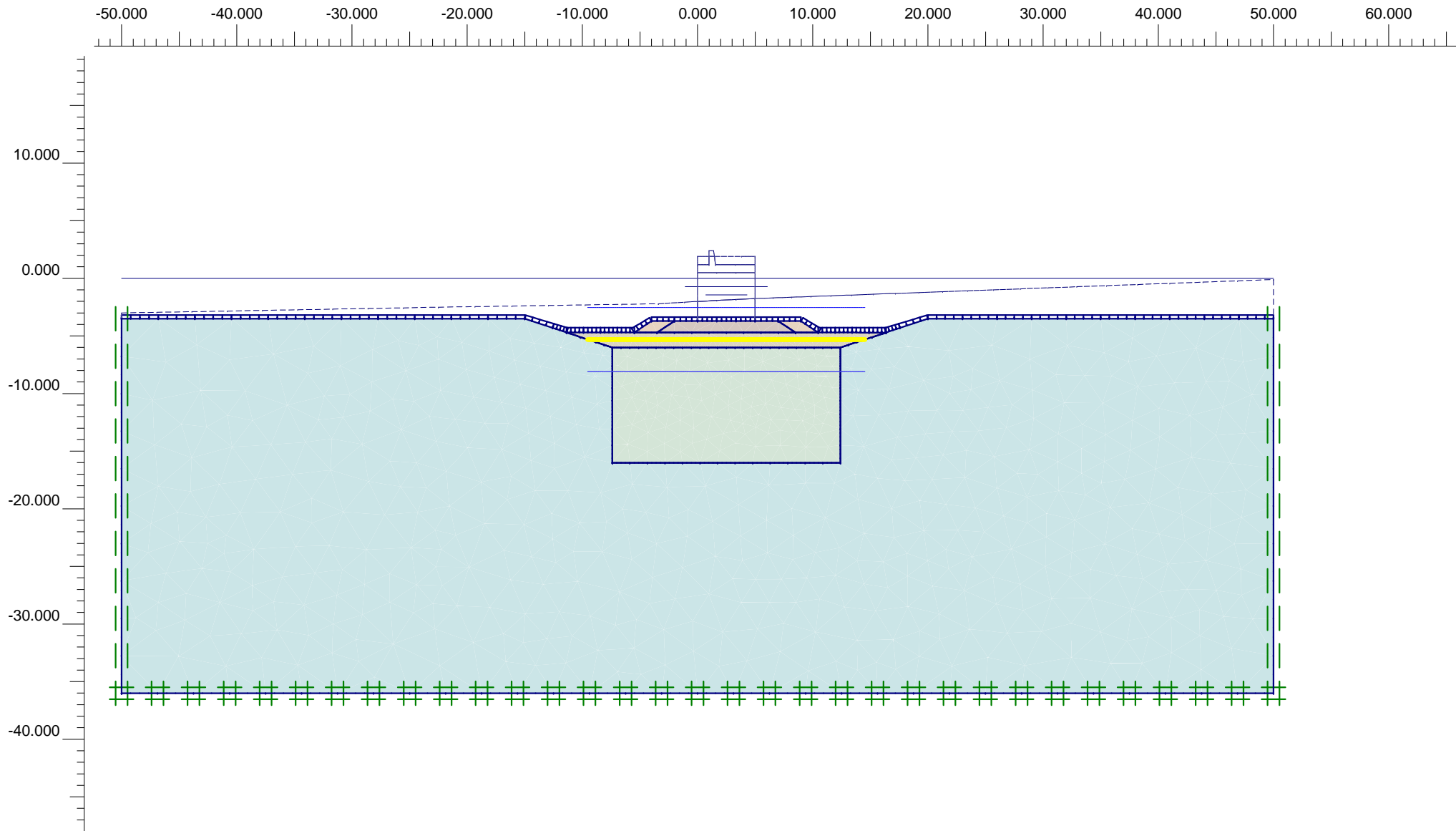
ForceX : 0.000 kN/m
ForceY : 0.000 kN/m

Consolidation

Realized Pmax : 0.000 kN/m²

PLASTIC STEP

Iter. No.	Global Error	Plastic Points	Plastic Cap + Hard. points	Inacc. Pl. pts.	Plastic Intf. pts.	Inacc. Intf. pts.	Apex & Tension	Inacc. Apx. pts.
1	0.000	220	34	59	0	0	0	0
2	0.000	220	34	7	0	0	0	0



Flow Field
 Extreme velocity 0.00 m/day Total discharge 0.00 m³/day/m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 4: ΚΑΤΑΣΚΕΥΗ ΠΡΙΣΜΑΤΟΣ ΕΔΡΑΣΗΣ (ΑΣΤΡΑΓΓΙΣΤΕΣ)

Project name

4195-TOMH-A-A...

Step

17

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

Plaxis - Finite Element Code for Soil and Rock Analyses

Project description : ΦΑΣΗ 4: ΣΤΟΙΧΕΙΑ ΑΝΑΛΥΣΗΣ

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

Project name : 4195-TOMH-A-A-R0

Output : Calculation information

Step : 17

Page : 1

Step info

Step : 17 of 44
PLASTIC STEP

Extrapolation factor :
Relative stiffness :

1.000
0.999

Multipliers

Incremental Multipliers

Total Multipliers

Prescribed displacements
Contraction tunnel A
Contraction tunnel B
Load system A
Load system B
Soil weight
Acceleration
Strength reduction factor
Time

Mdisp: 0.000
McontrA: 0.000
McontrB: 0.000
MloadA: 0.000
MloadB: 0.000
Mweight: 0.000
Maccel: 0.000
Msf: 0.000
Increment: 0.000

Σ-Mdisp: 0.000
Σ-McontrA: 0.000
Σ-McontrB: 0.000
Σ-MloadA: 0.000
Σ-MloadB: 0.000
Σ-Mweight: 1.000
Σ-Maccel: 0.000
Σ-Msf: 1.000
End time: 0.000

Staged construction

Active proportion total area
Active proportion of stage

Marea : 0.000
Mstage : 0.499

ΣMarea : 0.938
ΣMstage : 0.999