

## 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 :  
Relative stiffness :

0.363  
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

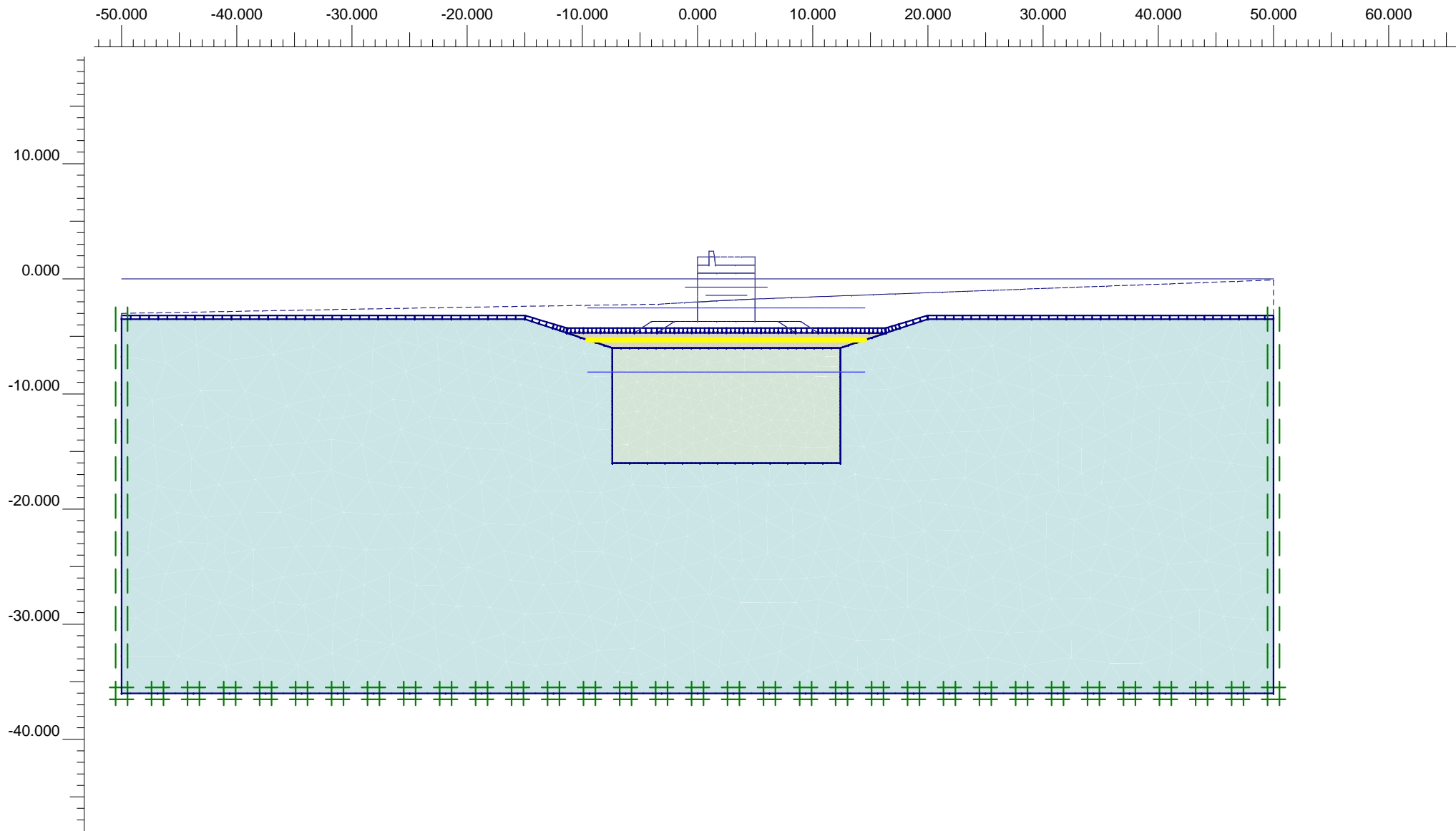
ForceX : 0.000 kN/m  
ForceY : 0.000 kN/m

### Consolidation

Realized Pmax : 0.000 kN/m<sup>2</sup>

### 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 m<sup>3</sup>/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

### Consolidation

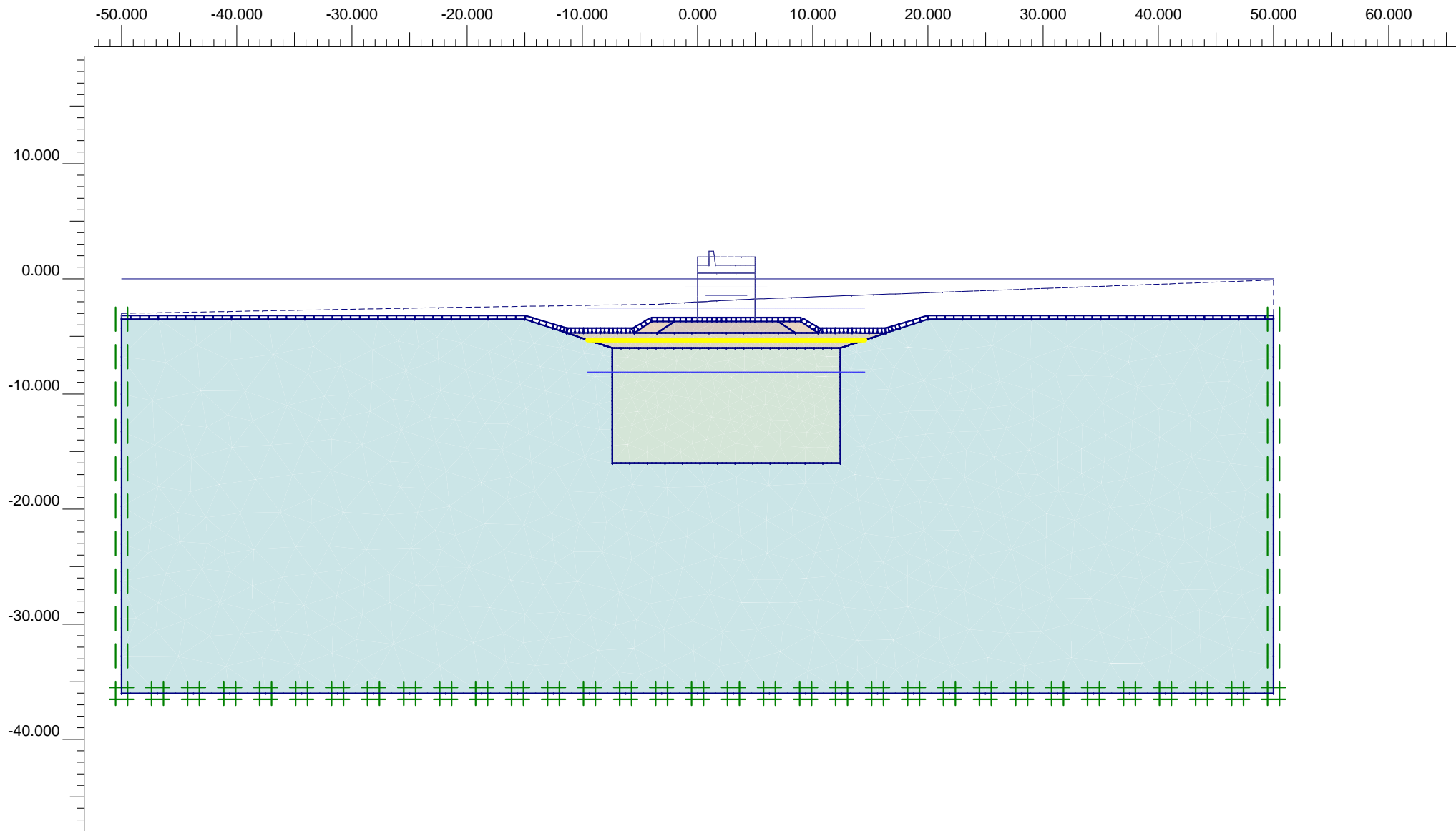
ForceX : 0.000 kN/m

Realized Pmax : 0.000 kN/m<sup>2</sup>

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	0.000	220	34	59	0	0	0	0
2	0.000	220	34	7	0	0	0	0



## 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	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 :	0.938
Active proportion of stage	Mstage :	0.499	ΣMstage :	0.999

### 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 : 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 : 5.284 kN/m<sup>2</sup>

## 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

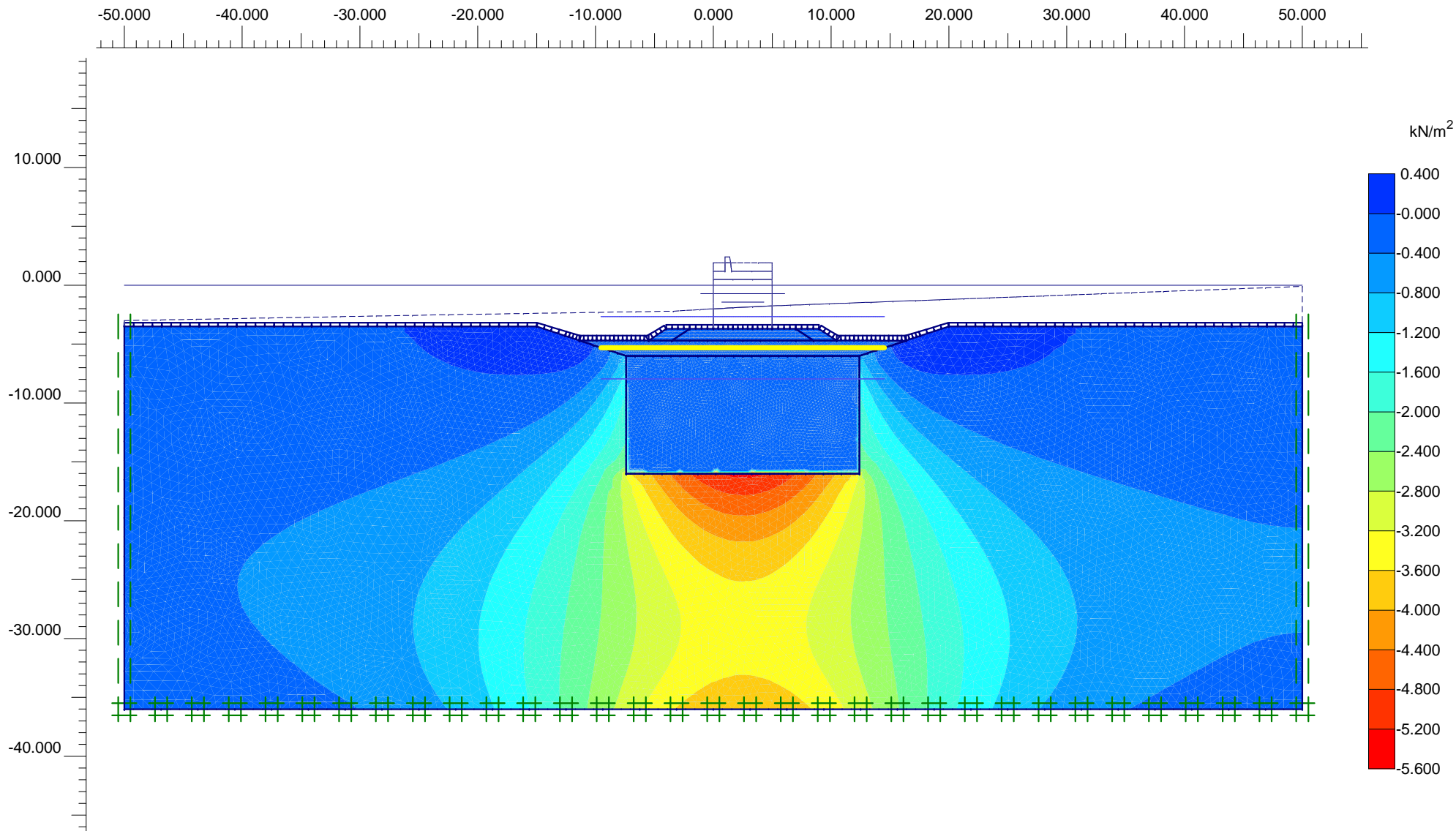
Output : Calculation information

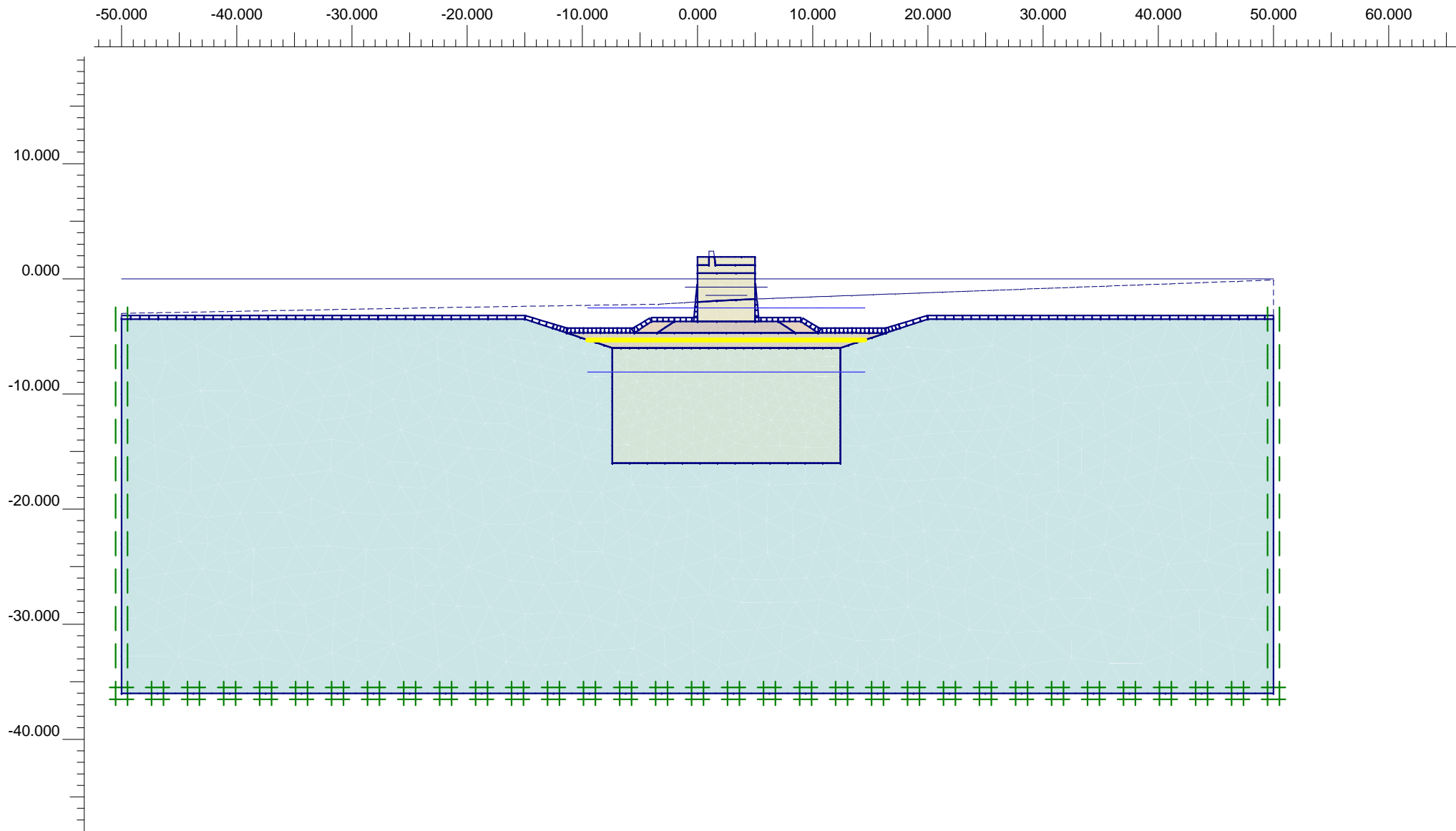
Step : 17

Page : 3

### 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	160	44	79	0	0	0	0
2	0.000	157	43	41	0	0	0	0
3	0.000	157	43	40	0	0	0	0
4	0.000	154	43	39	0	0	0	0
5	0.000	148	43	38	0	0	0	0
6	0.000	148	43	36	0	0	0	0
7	0.000	147	43	33	0	0	0	0
8	0.000	143	43	29	0	0	0	0
9	0.000	139	43	20	0	0	0	0
10	0.000	138	43	16	0	0	0	0





**Flow Field**  
 Extreme velocity 0.00 m/day Total discharge 0.00 m<sup>3</sup>/day/m

## 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-A-A-R0

Output : Calculation information

Step : 21

Page : 1

### Step info

Step : 21 of 44  
PLASTIC STEP

Extrapolation factor :  
Relative stiffness :

0.538  
0.287

### 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 :	0.946
Active proportion of stage	Mstage :	0.166	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-A-A-R0

Output : Calculation information

Step : 21

Page : 2

### Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

### Forces

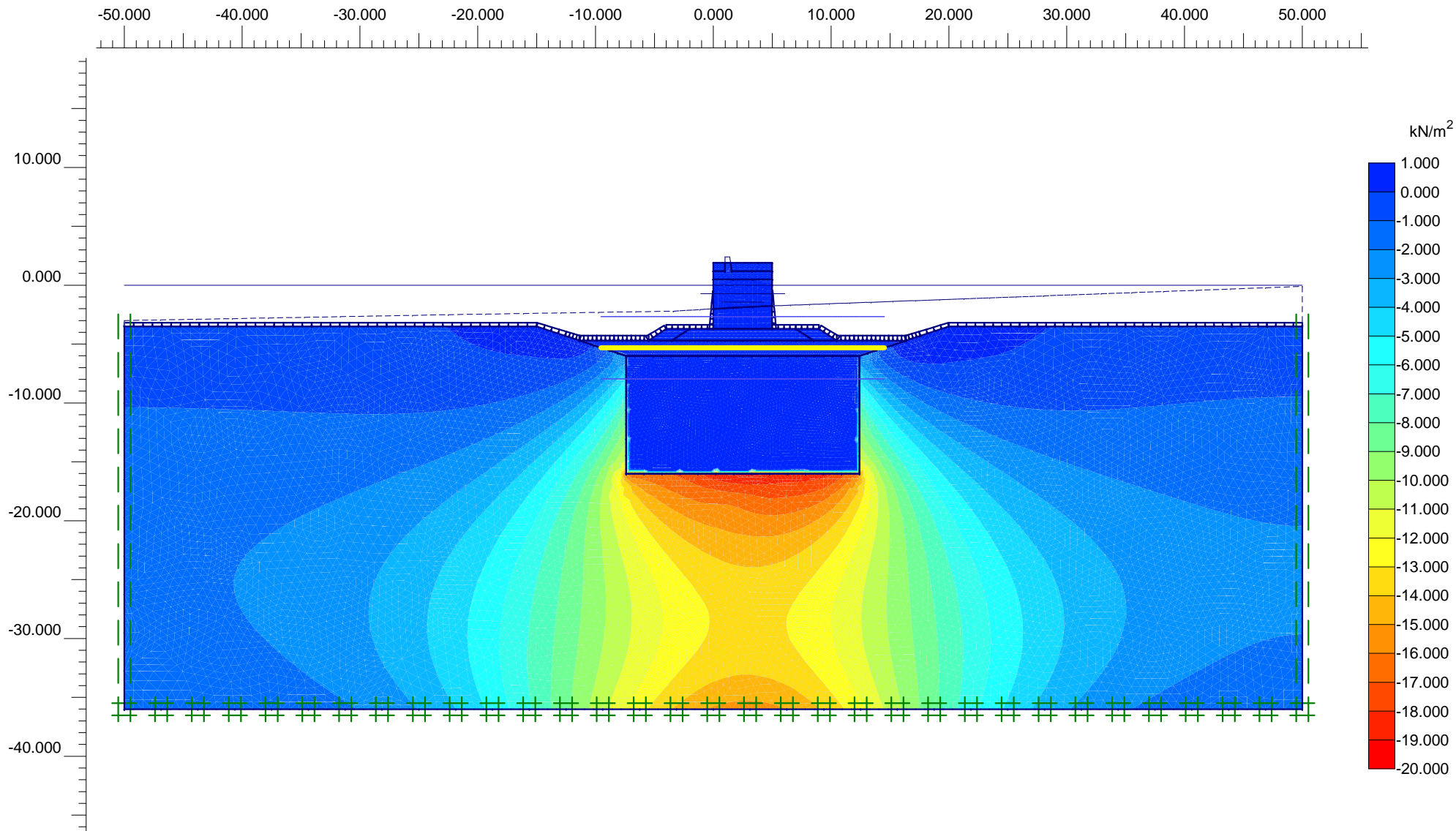
ForceX : 0.000 kN/m  
ForceY : 0.000 kN/m

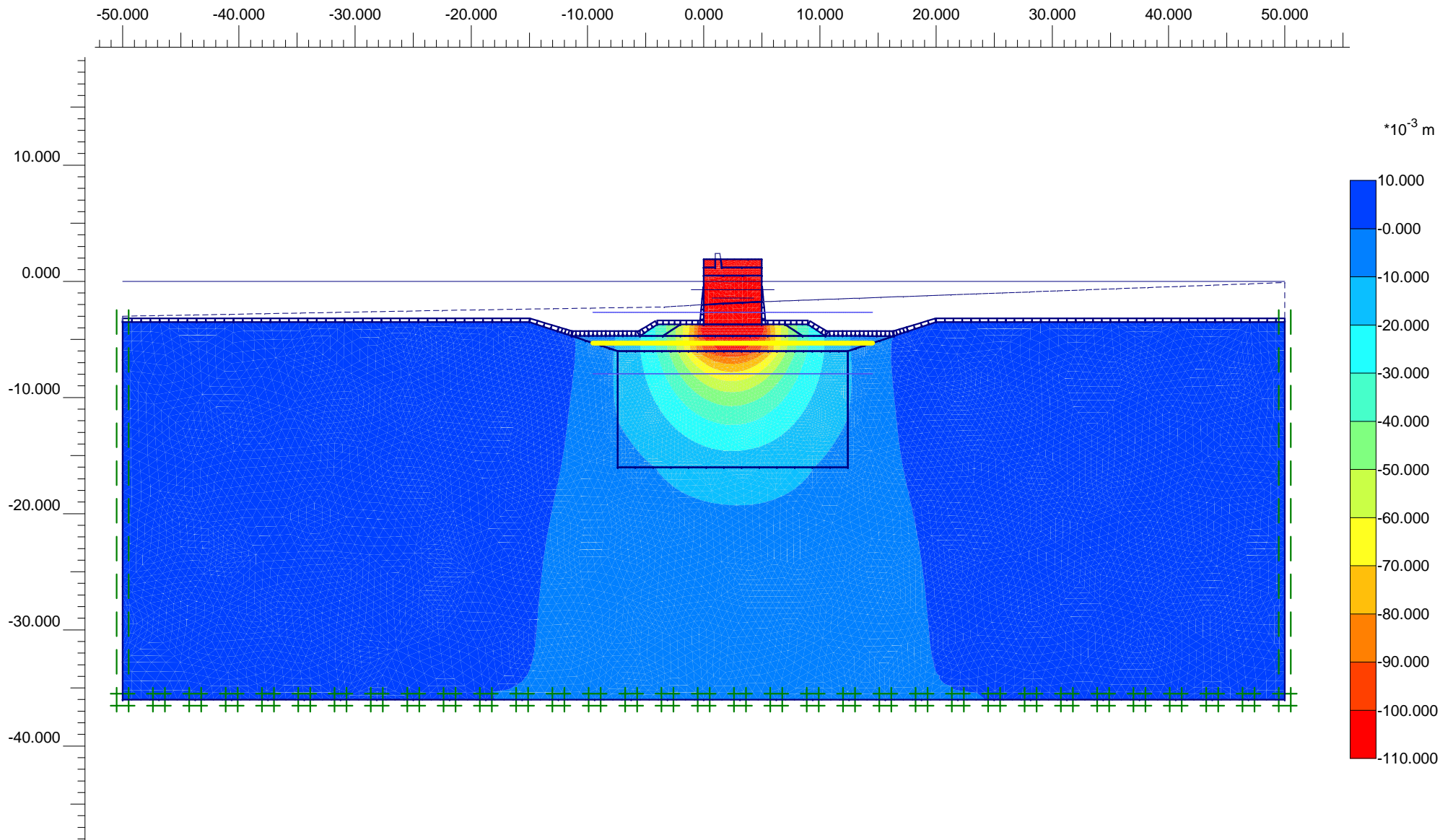
### Consolidation

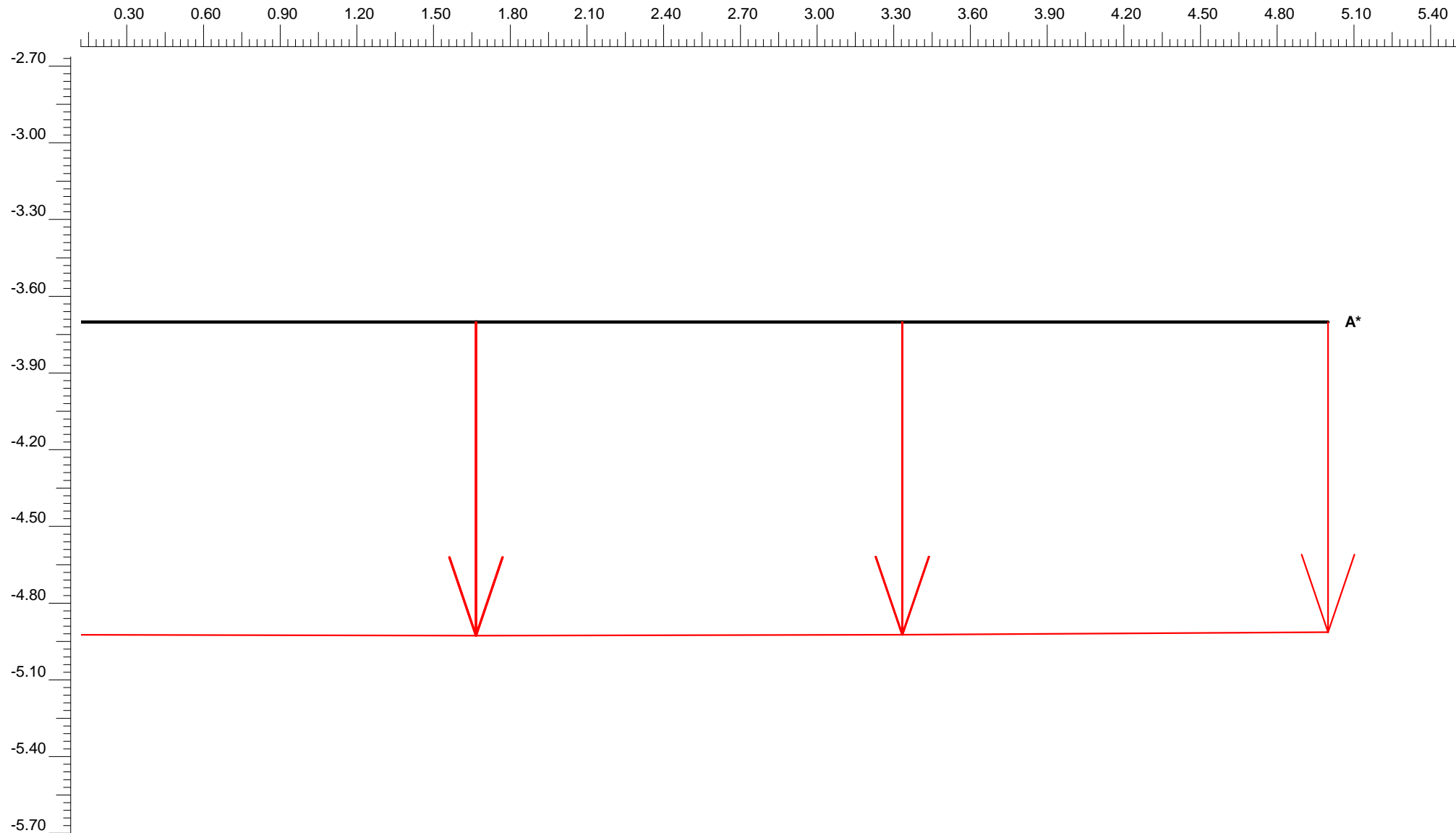
Realized Pmax : 19.234 kN/m<sup>2</sup>

### 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	3351	2682	399	27	14	0	0
2	0.001	3311	2669	215	26	0	0	0







**Vertical displacements**  
Extreme vertical displacement  $-107.97 \times 10^{-3}$  m

### 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.

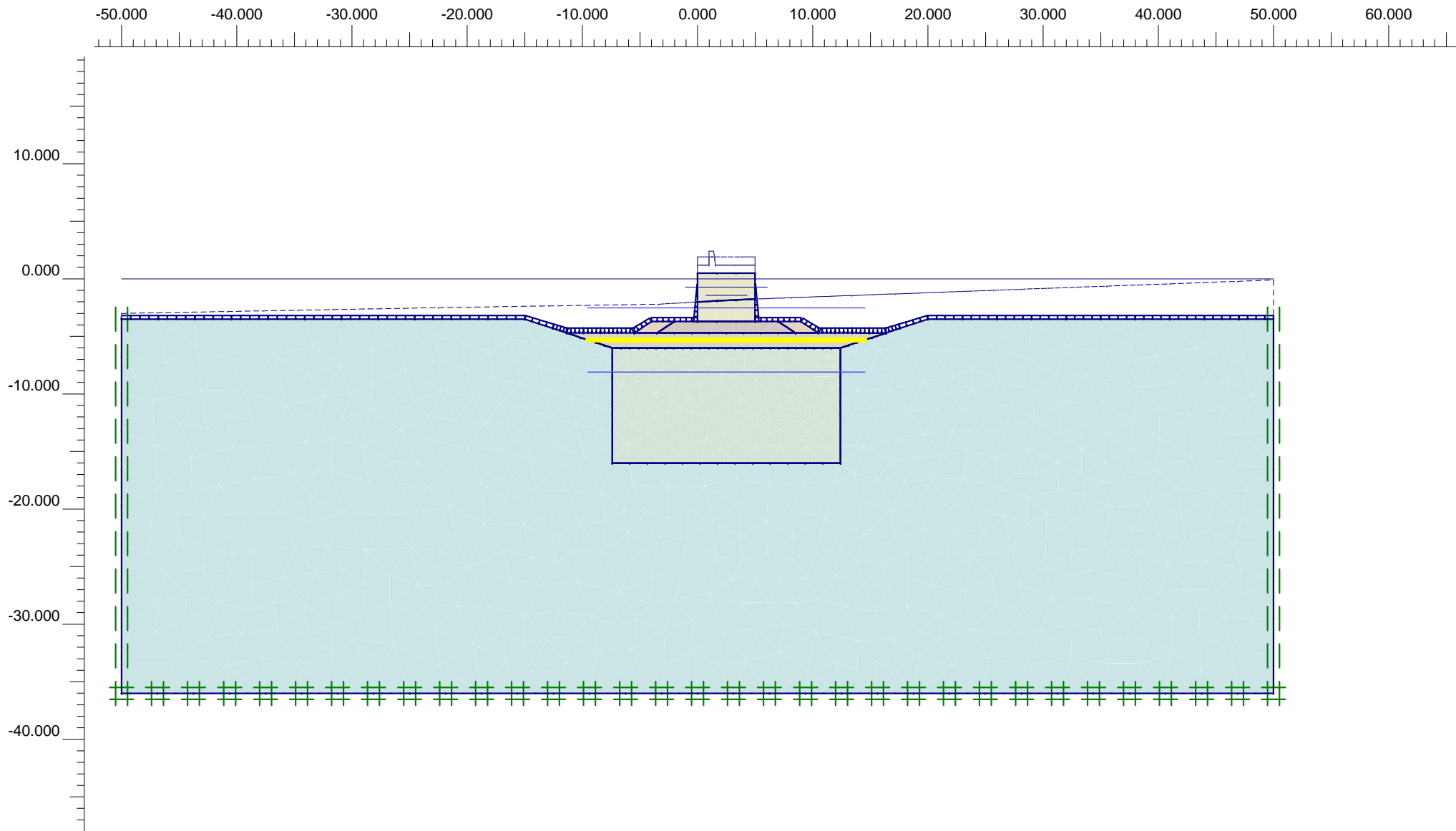
Project name : 4195-TOMH-A-A-R0

Output : TOMH-A-A-R0.021 -- Cross Section A - A\* Table

Step : 21

Page : 1

X [m]	Y [m]	U <sub>y</sub> [10 <sup>-3</sup> m]
0.000	-3.701	-107.629
1.665	-3.701	-107.969
1.665	-3.701	-107.969
1.666	-3.701	-107.967
1.666	-3.701	-107.967
1.667	-3.701	-107.966
1.667	-3.701	-107.966
3.333	-3.701	-107.673
3.333	-3.701	-107.673
3.334	-3.701	-107.673
3.334	-3.701	-107.673
4.999	-3.701	-106.773



**Flow Field**  
 Extreme velocity 0.00 m/day Total discharge 0.00 m<sup>3</sup>/day/m



Project description

ΦΑΣΗ 6: ΑΠΟΜΑΚΡΥΝΣΗ Τ.Ο. ΕΠΙΦΟΡΤΙΣΗΣ

Project name

4195-TOMH-A-A...

Step

28

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-A-A-R0

Output : Calculation information

Step : 28

Page : 1

### Step info

Step : 28 of 44  
PLASTIC STEP

Extrapolation factor :  
Relative stiffness :

0.137  
0.662

### 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 :	0.944
Active proportion of stage	Mstage :	0.024	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-A-A-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

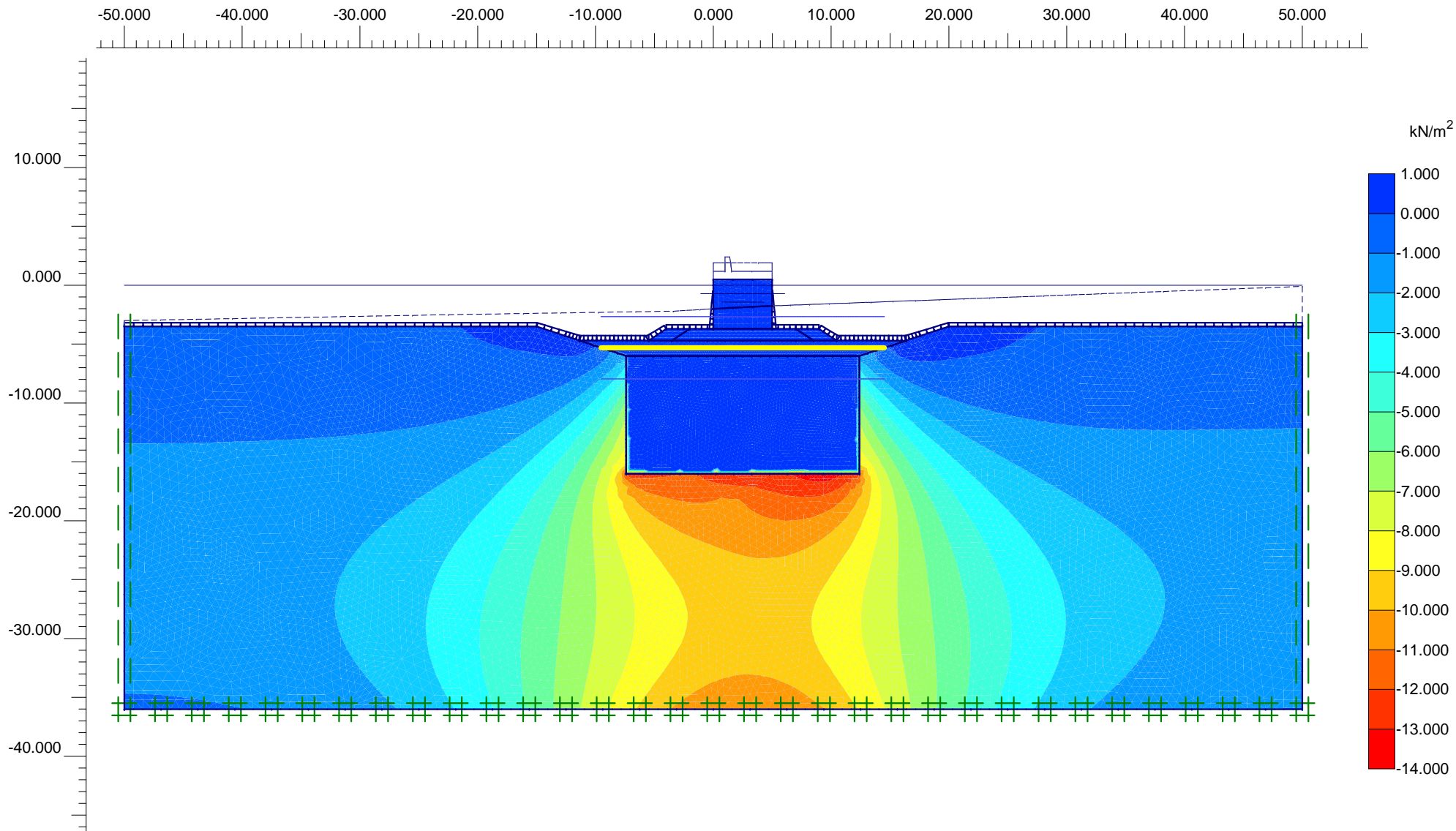
ForceX : 0.000 kN/m

Realized Pmax : 14.067 kN/m<sup>2</sup>

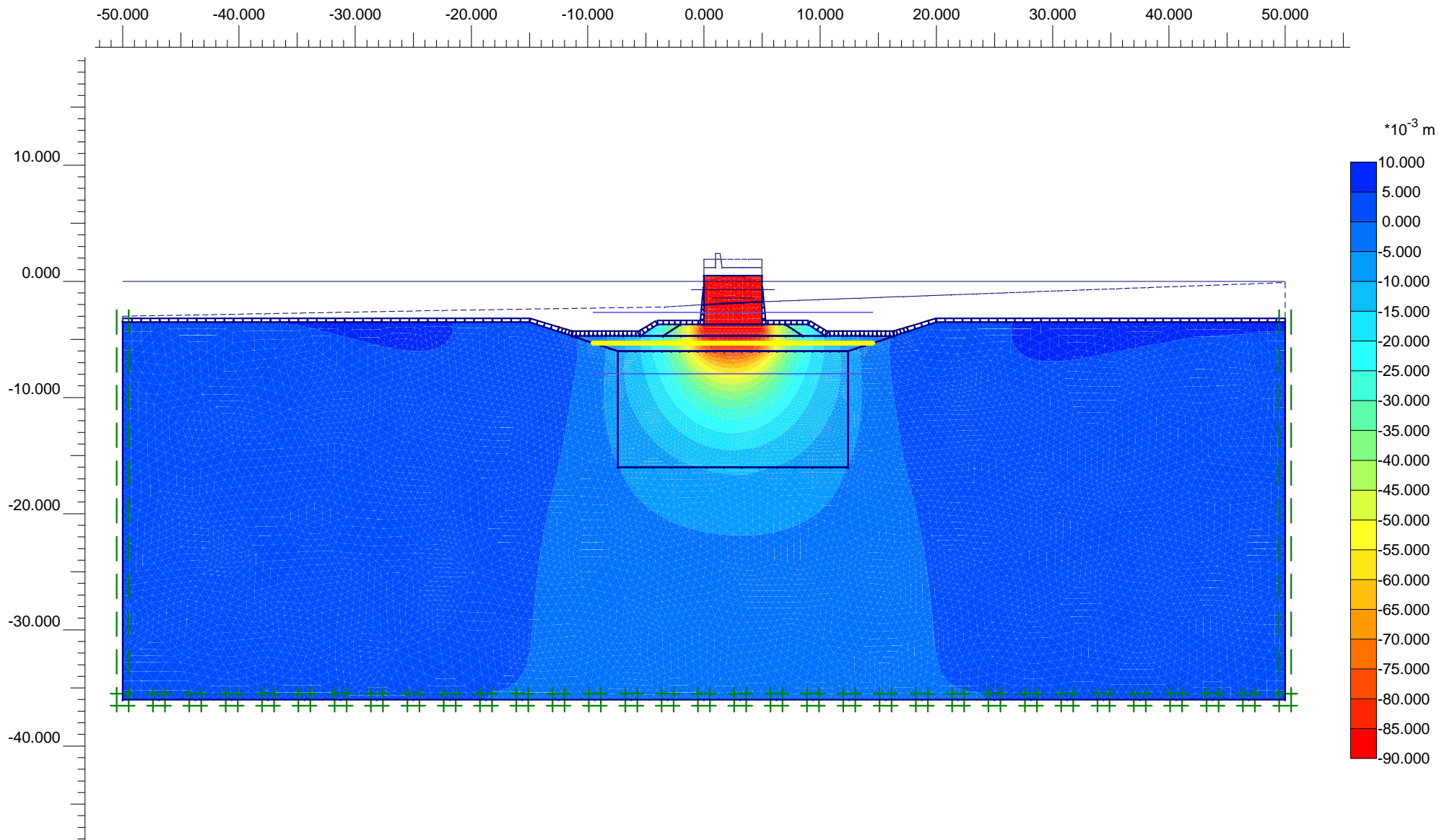
ForceY : 0.000 kN/m

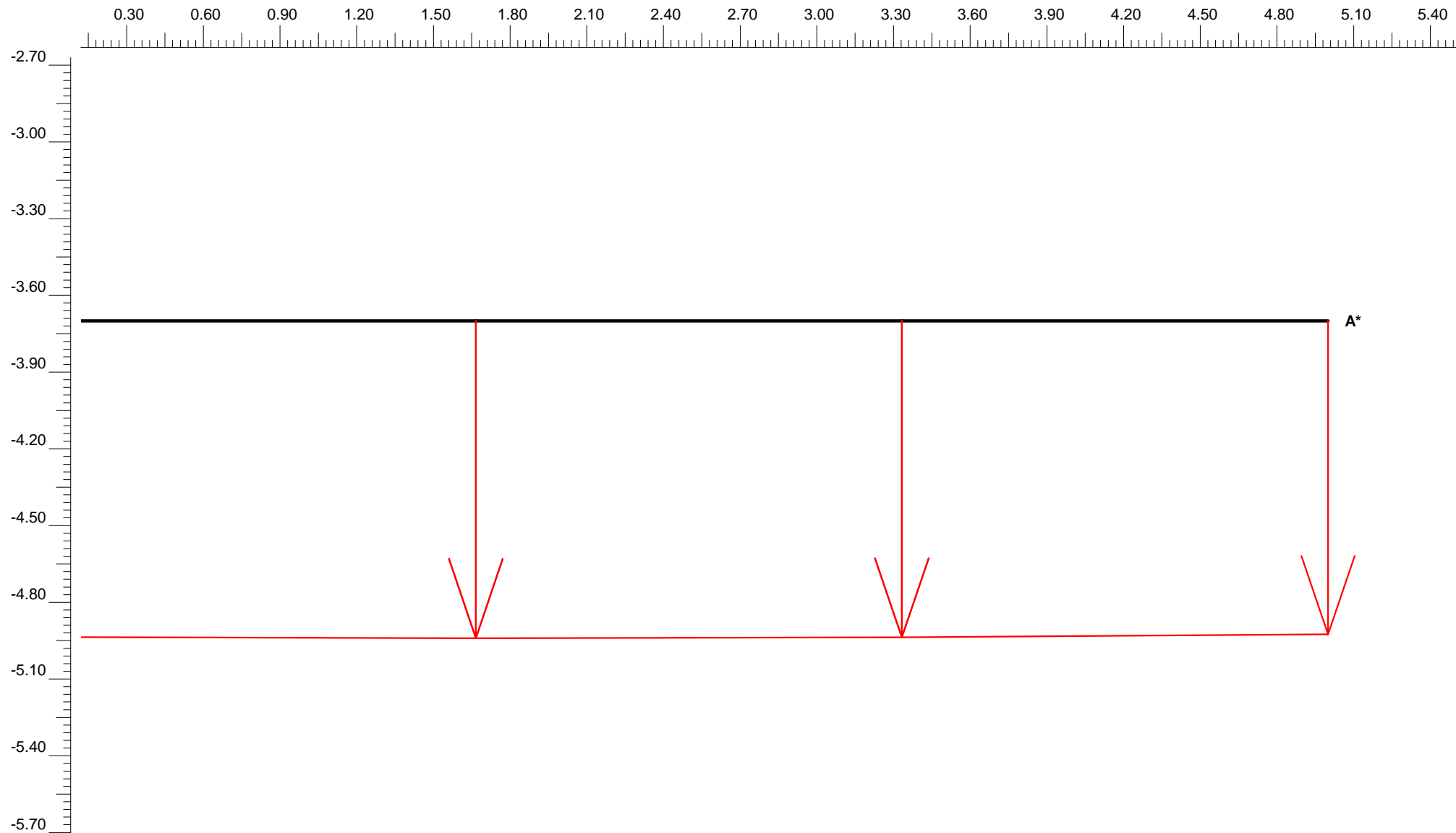
### PLASTIC STEP

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	0.000	171	7	77	11	0	0	0
2	0.000	167	7	8	11	0	0	0



**Excess pore pressures**  
 Extreme excess pore pressure -13.76 kN/m<sup>2</sup>  
 (pressure = negative)





**Vertical displacements**  
 Extreme vertical displacement  $-88.65 \cdot 10^{-3}$  m



Finite Element Code for Soil and Rock Analyses

Project description

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

Project name

4195-TOMH-A-A...

Step

28

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.

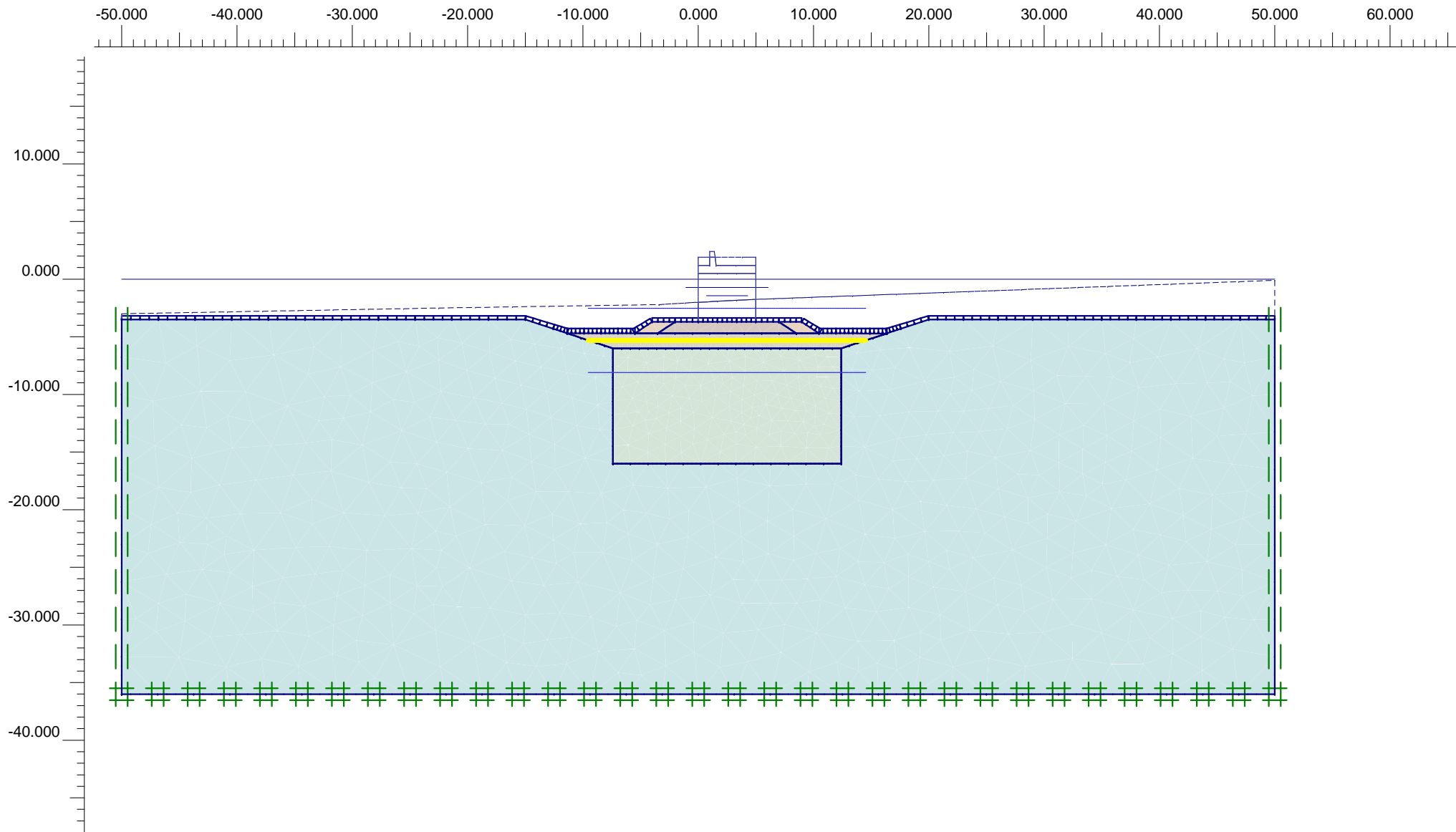
Project name : 4195-TOMH-A-A-R0

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

Step : 28

Page : 1

X [m]	Y [m]	U <sub>y</sub> [10 <sup>-3</sup> m]
0.000	-3.700	-88.293
1.667	-3.700	-88.652
1.667	-3.700	-88.652
3.333	-3.700	-88.387
3.333	-3.700	-88.387
5.000	-3.700	-87.521



## 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-A-A-R0

Output : Calculation information

Step : 32

Page : 1

### Step info

Step : 32 of 44  
PLASTIC STEP

Extrapolation factor :  
Relative stiffness :

0.400  
0.985

### 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 :	0.938
Active proportion of stage	Mstage :	0.118	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-A-A-R0

Output : Calculation information

Step : 32

Page : 2

### Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

### Forces

### Consolidation

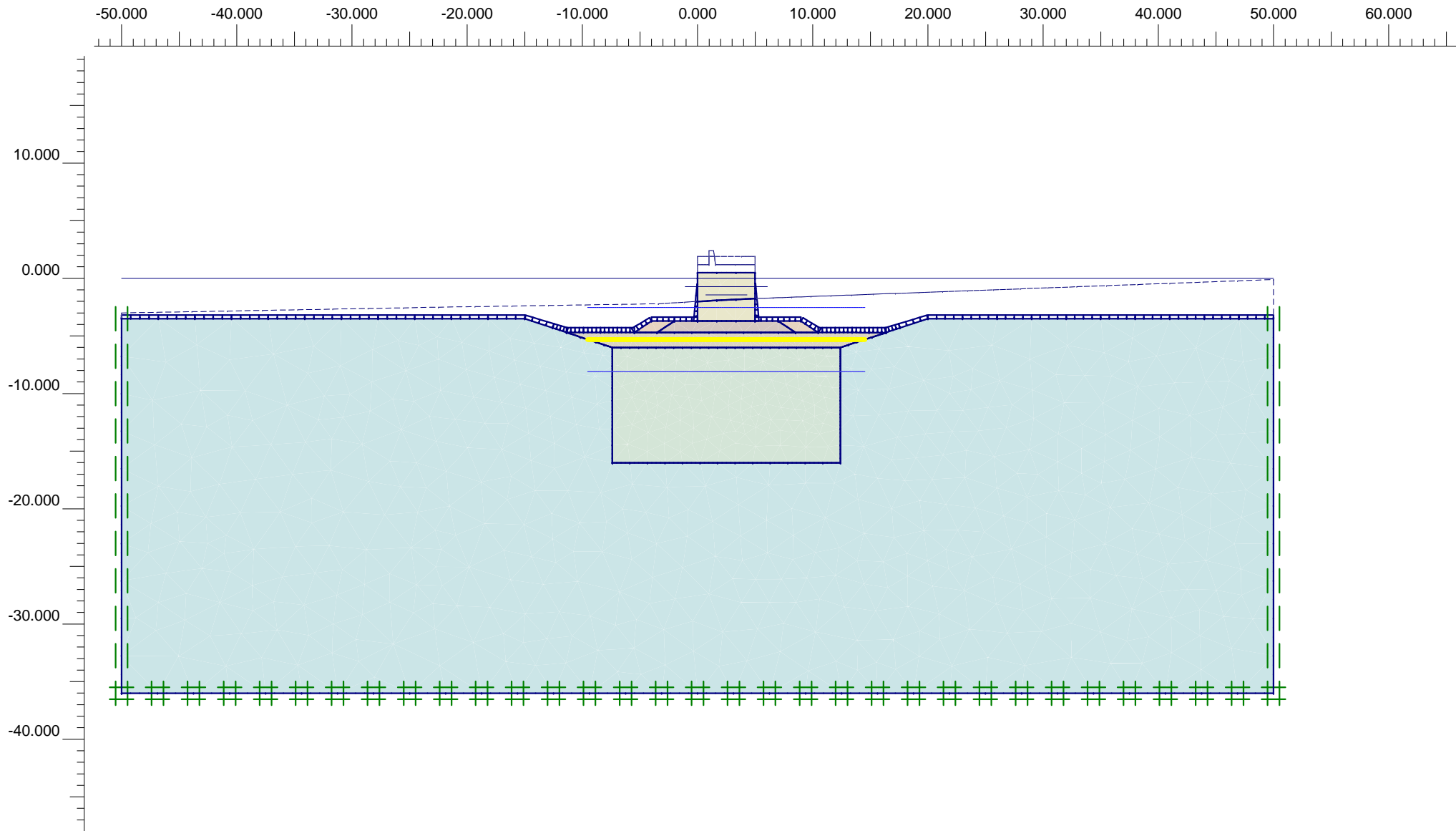
ForceX : 0.000 kN/m

Realized Pmax : 0.000 kN/m<sup>2</sup>

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	0.000	116	3	82	0	0	0	0
2	0.000	115	2	4	0	0	0	0



**Flow Field**  
 Extreme velocity 0.00 m/day Total discharge 0.00 m<sup>3</sup>/day/m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 8: ΤΟΠΟΘΕΤΗΣΗ Τ.Ο. (ΣΤΡΑΓΓΙΖΟΜΕΝΕΣ)

Project name

4195-TOMH-A-A...

Step

38

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-A-A-R0

Output : Calculation information

Step : 38

Page : 1

### Step info

Step : 38 of 44  
PLASTIC STEP

Extrapolation factor :  
Relative stiffness :

0.961  
0.432

### 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 :	0.944
Active proportion of stage	Mstage :	0.222	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-A-A-R0

Output : Calculation information

Step : 38

Page : 2

### Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

### Forces

### Consolidation

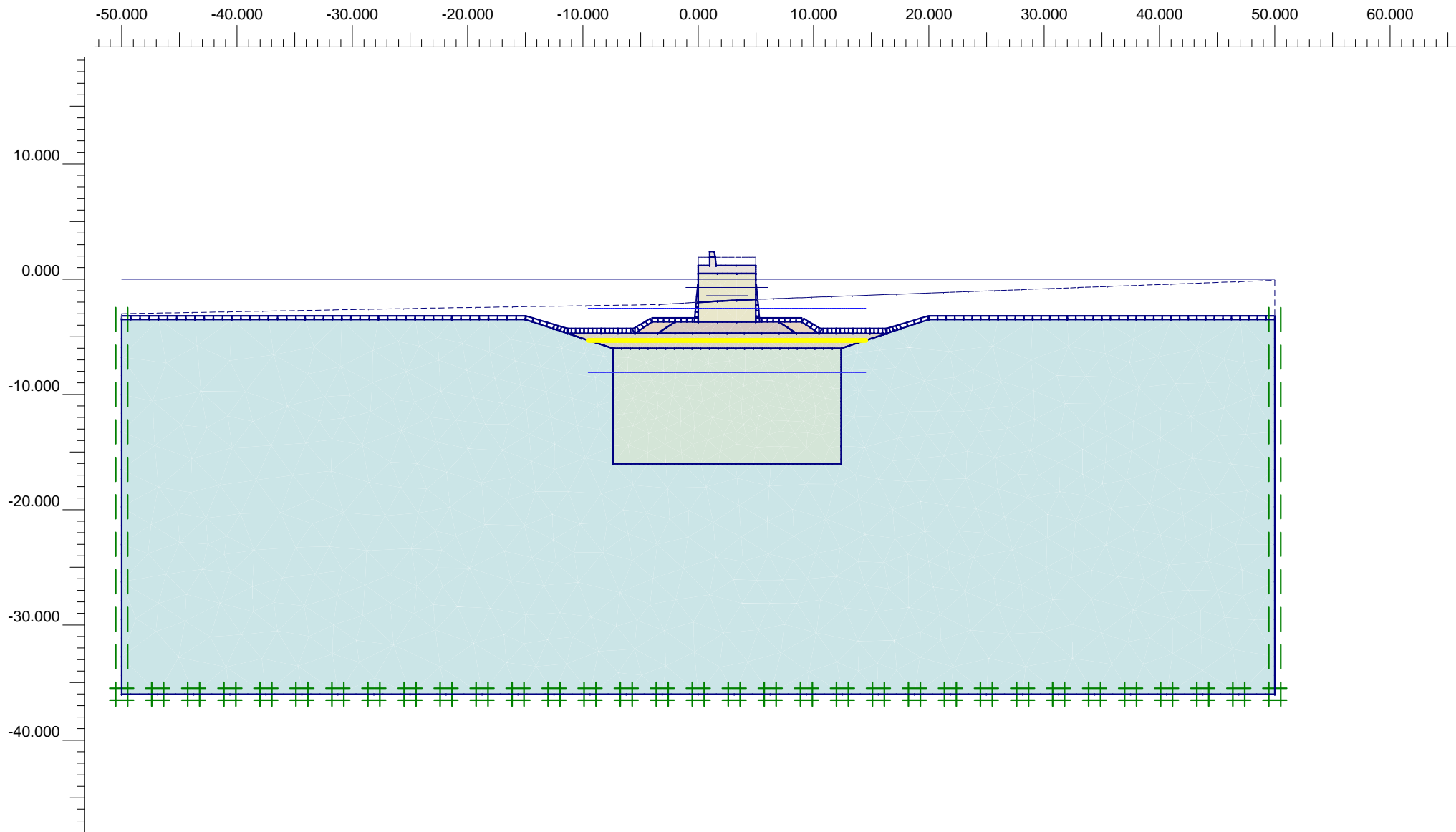
ForceX : 0.000 kN/m

Realized Pmax : 0.000 kN/m<sup>2</sup>

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	2805	2191	405	0	0	0	0
2	0.001	2750	2159	197	0	0	0	0



**Flow Field**  
 Extreme velocity 0.00 m/day Total discharge 0.00 m<sup>3</sup>/day/m



Finite Element Code for Soil and Rock Analyses

Project description

ΦΑΣΗ 9: ΚΑΤΑΣΚΕΥΗ ΑΝΩΔΟΜΗΣ (ΣΤΡΑΓΓΙΖΟΜΕΝΕΣ)

Project name

4195-TOMH-A-A...

Step

41

Date

19/10/23

User name

Triton Consulting Engineers Ltd.

## 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-A-A-R0

Output : Calculation information

Step : 41

Page : 1

### Step info

Step : 41 of 44  
PLASTIC STEP

Extrapolation factor :  
Relative stiffness :

0.225  
0.081

### 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 :	0.945
Active proportion of stage	Mstage :	0.038	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-A-A-R0

Output : Calculation information

Step : 41

Page : 2

### Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

### Forces

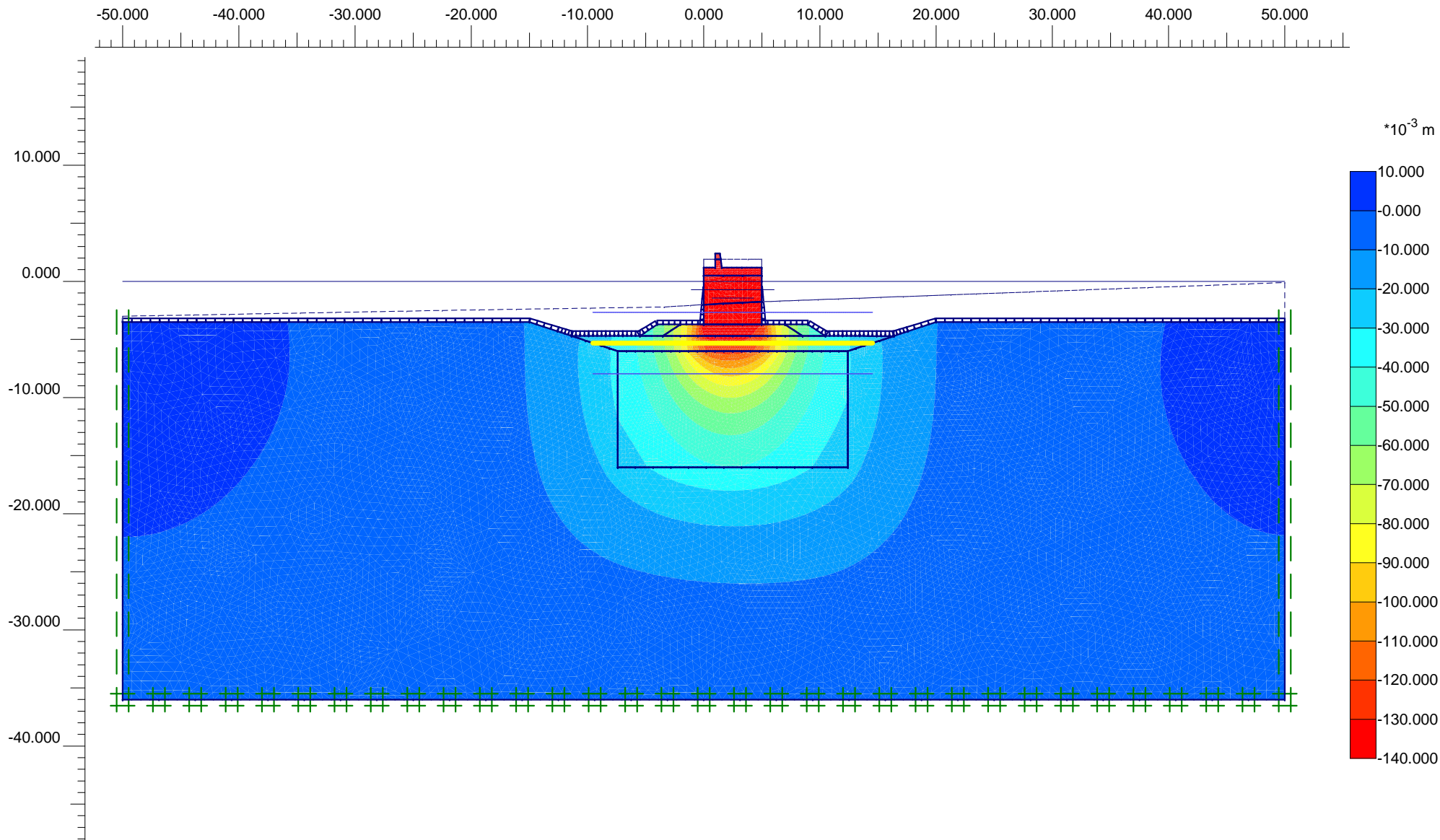
ForceX : 0.000 kN/m  
ForceY : 0.000 kN/m

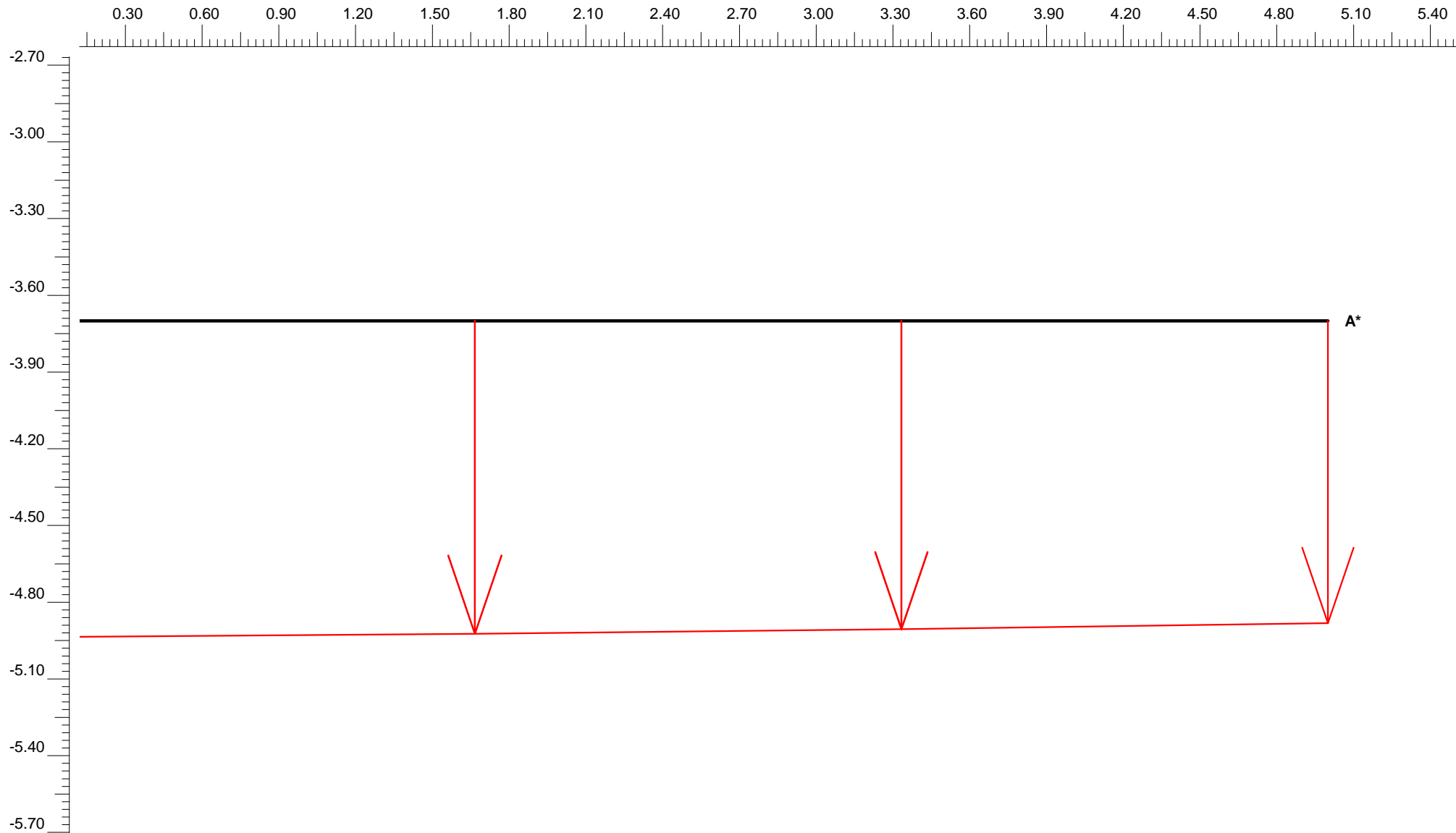
### Consolidation

Realized Pmax : 0.000 kN/m<sup>2</sup>

### 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	3998	3490	407	49	35	0	0
2	0.001	3959	3463	116	51	0	0	0





**Vertical displacements**  
 Extreme vertical displacement  $-136.13 \cdot 10^{-3}$  m

### Plaxis - Finite Element Code for Soil and Rock Analyses

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

Date : 19/10/2023

User name : Triton Consulting Engineers Ltd.

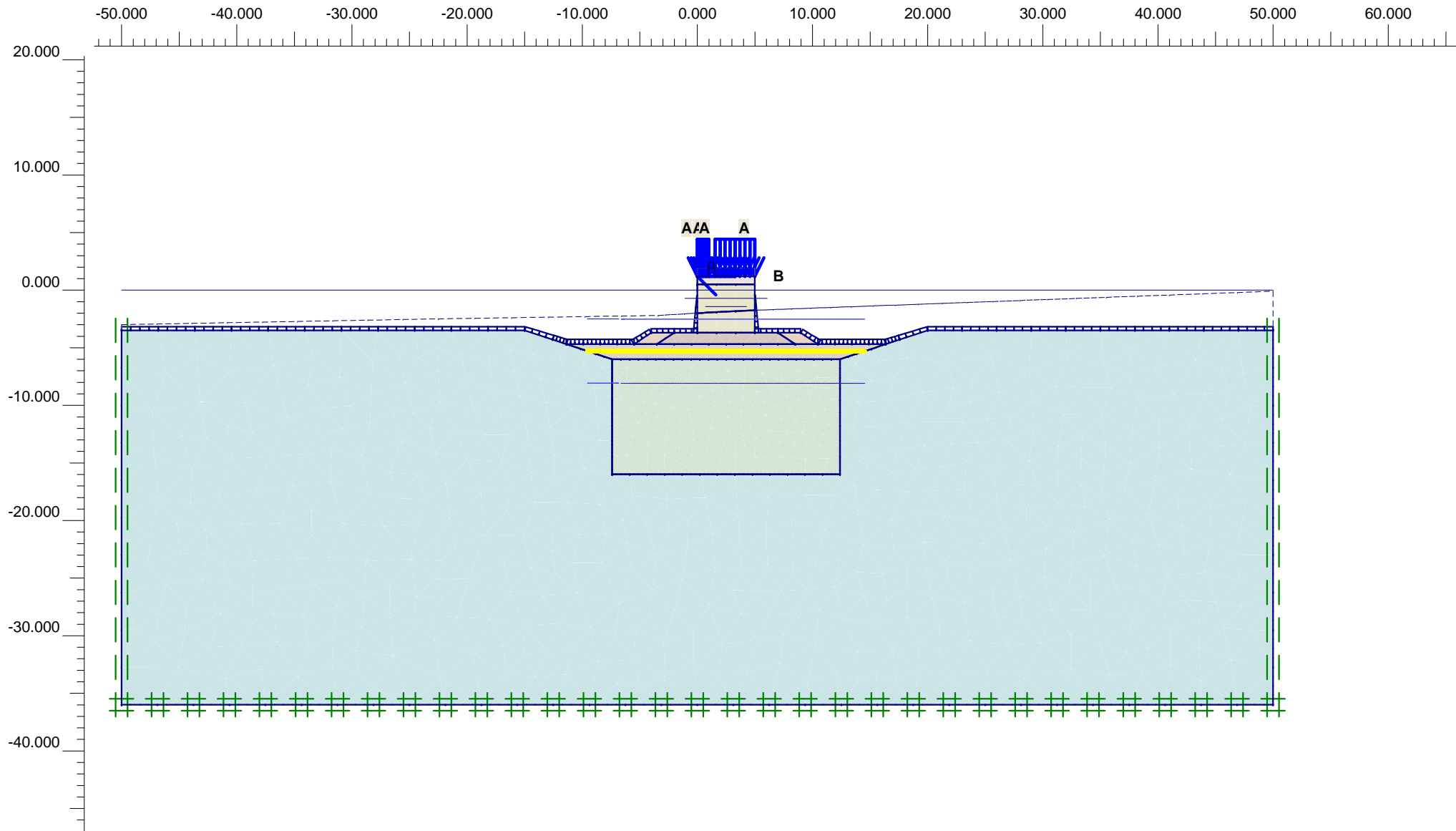
Project name : 4195-TOMH-A-A-R0

Output : TOMH-A-A-R0.041 -- Cross Section A - A\* Table

Step : 41

Page : 1

X [m]	Y [m]	U <sub>y</sub> [10 <sup>-3</sup> m]
0.000	-3.700	-136.125
1.667	-3.700	-134.765
1.667	-3.700	-134.765
3.333	-3.700	-132.779
3.333	-3.700	-132.779
5.000	-3.700	-130.191



**Flow Field**  
 Extreme velocity 0.00 m/day Total discharge 0.00 m<sup>3</sup>/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-A-A-R0

Output : Calculation information

Step : 44

Page : 1

### Step info

Step : 44 of 44  
PLASTIC STEP

Extrapolation factor :  
Relative stiffness :

0.229  
0.097

### 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:	0.640	Σ-MloadA:	10.000
Load system B	MloadB:	0.640	Σ-MloadB:	10.000
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 :	0.945
Active proportion of stage	Mstage :	0.000	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-A-A-R0

Output : Calculation information

Step : 44

Page : 2

### Tunnels

Input value [%]

Realized value [%]

Contraction tunnel A :

N/A

N/A

Contraction tunnel B :

N/A

N/A

### Forces

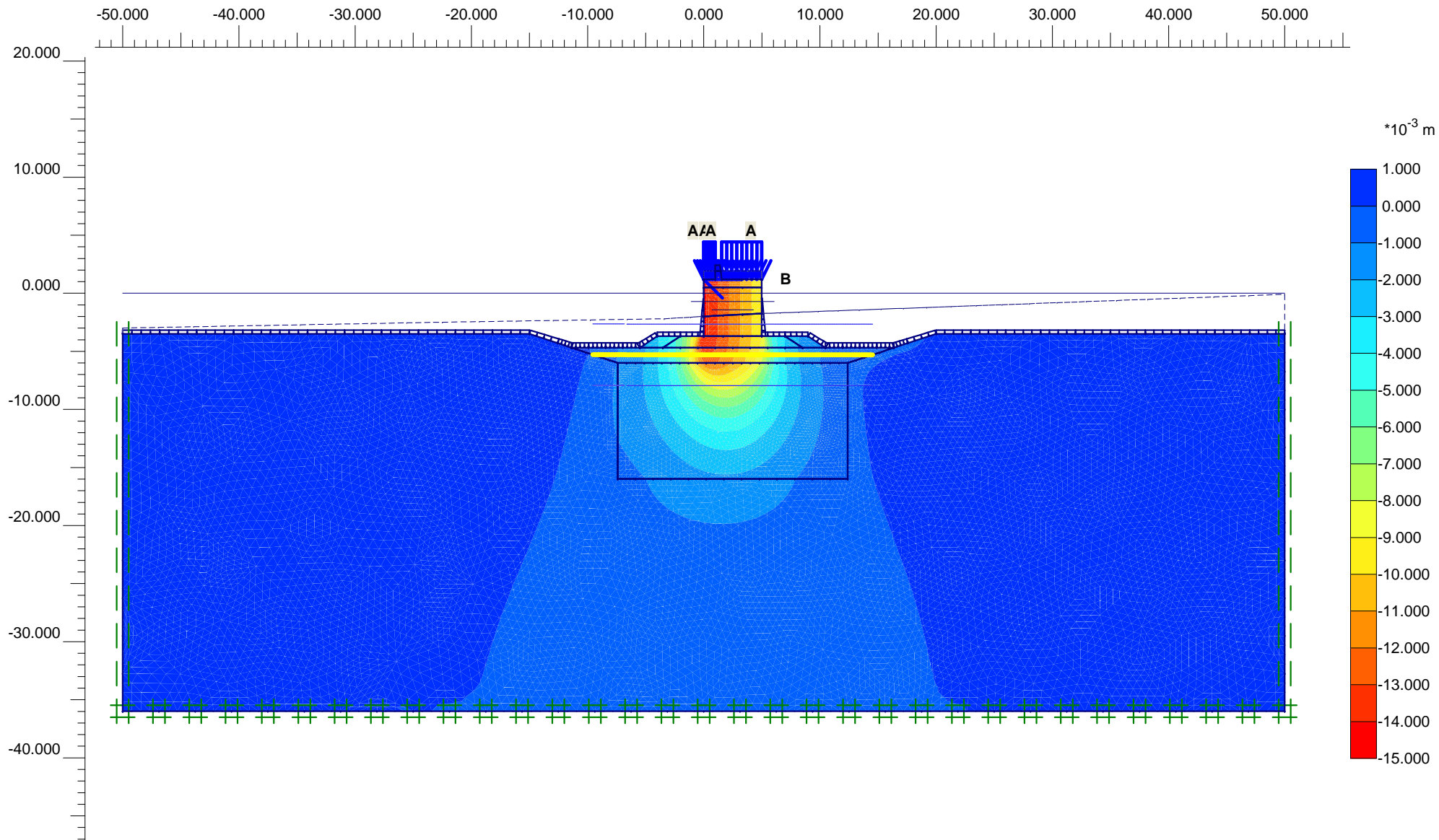
ForceX : 0.000 kN/m  
ForceY : 0.000 kN/m

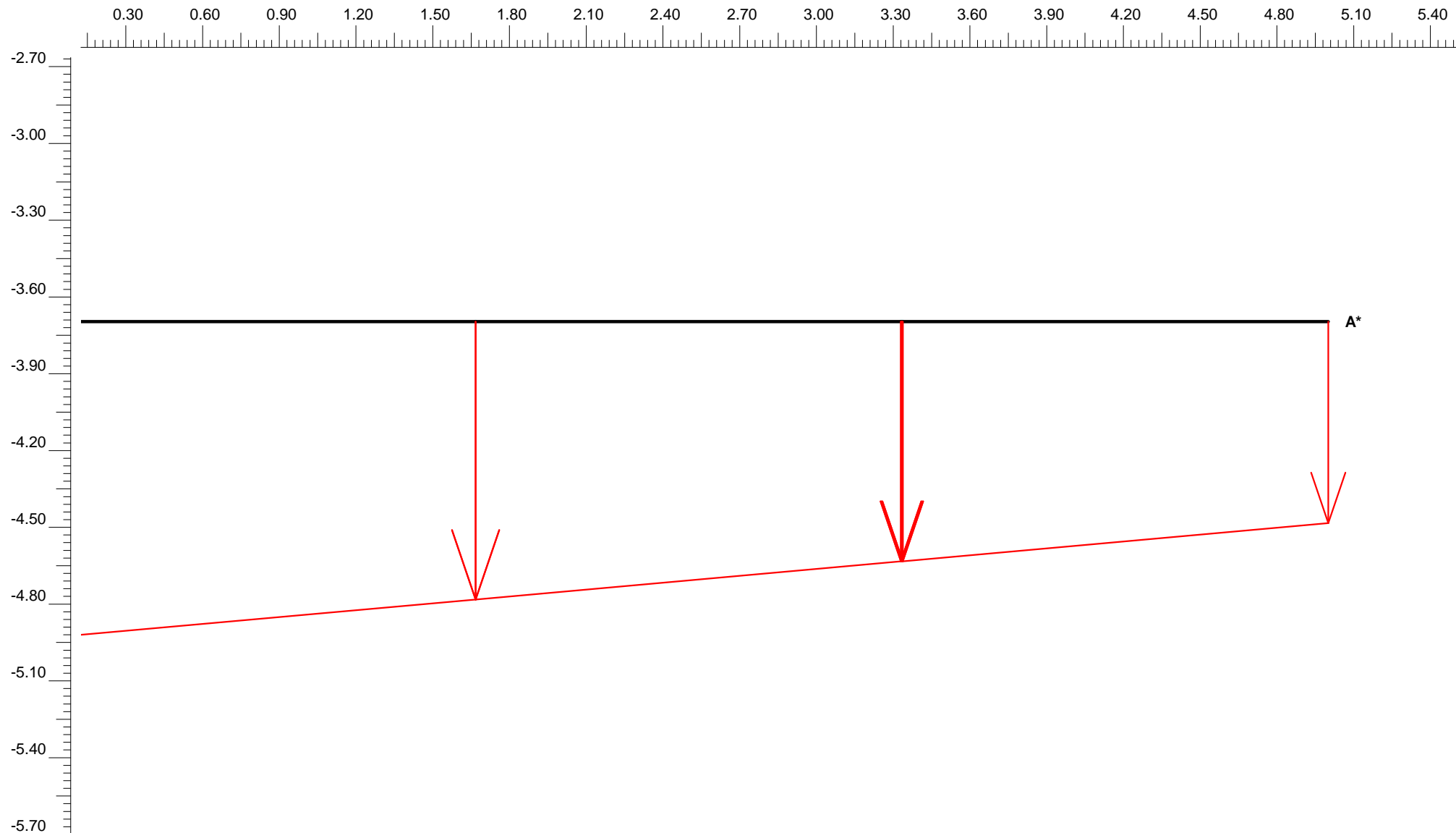
### Consolidation

Realized Pmax : 2.048 kN/m<sup>2</sup>

### 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	0.008	4496	3938	223	55	26	0	0
2	0.008	4359	3824	152	46	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-A-A-R0

Output : TOMH-A-A-R0.044 -- Cross Section A - A\* Table

Step : 44

Page : 1

X [m]	Y [m]	U <sub>y</sub> [10 <sup>-3</sup> m]
0.004	-3.696	-14.248
1.667	-3.696	-12.532
1.667	-3.696	-12.532
3.330	-3.696	-10.814
3.330	-3.696	-10.814
3.333	-3.696	-10.810
3.333	-3.696	-10.810
3.337	-3.696	-10.807
3.337	-3.696	-10.807
5.000	-3.696	-9.088