

**Anexo E**  
Análises de estabilidade

JOI/001

# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 1.14492

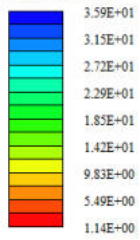
Centro: 20.745,20.3591

Raio: 10.5862

Ponto da Superfície Esq.: 10.7059,17

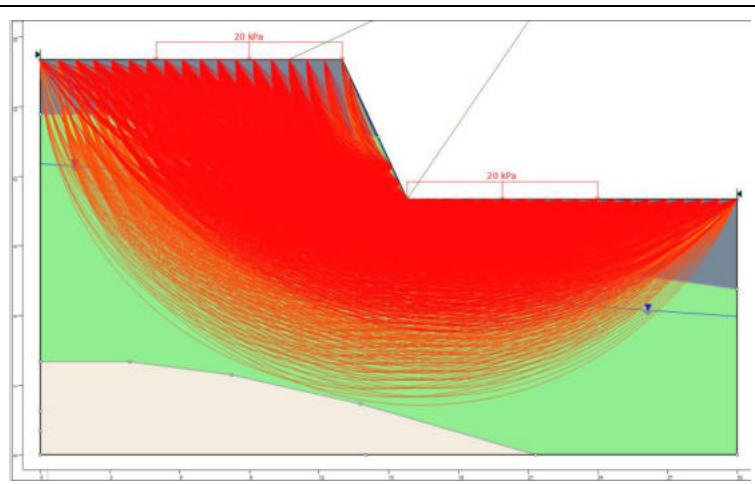
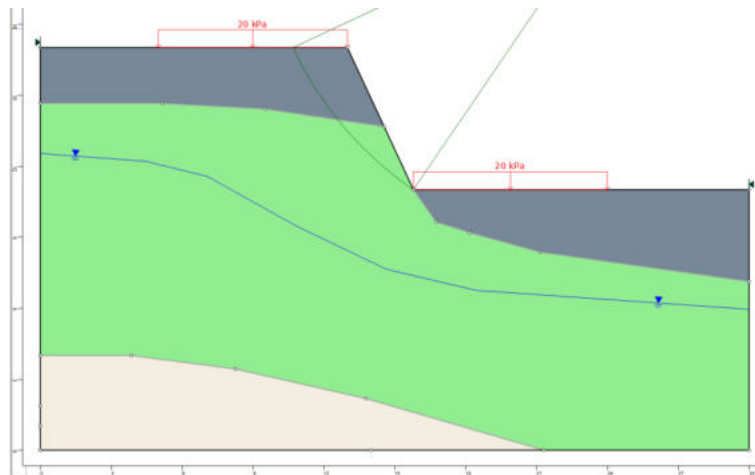
Ponto da Superfície Dir.: 15.7978,11

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 1.7783

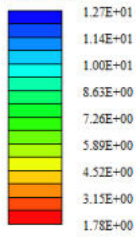
Centro: 64.6107,102.937

Raio: 80.6454

Ponto da Superfície Esq.: 8.53333,44.9804

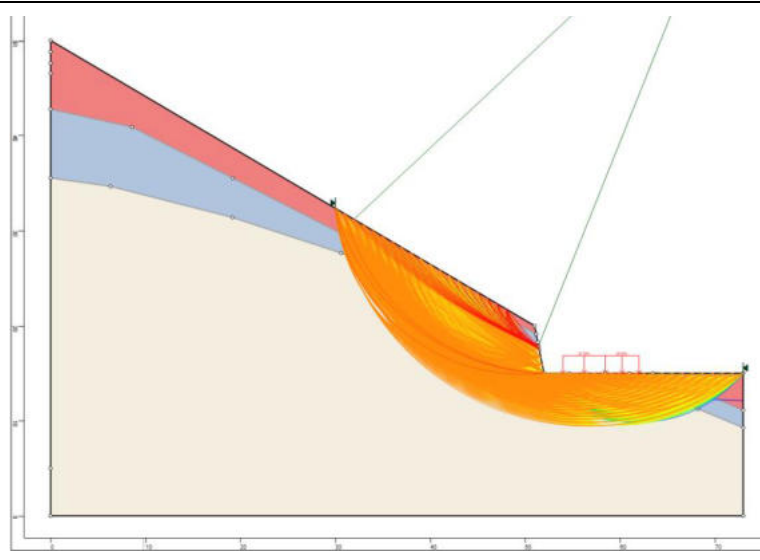
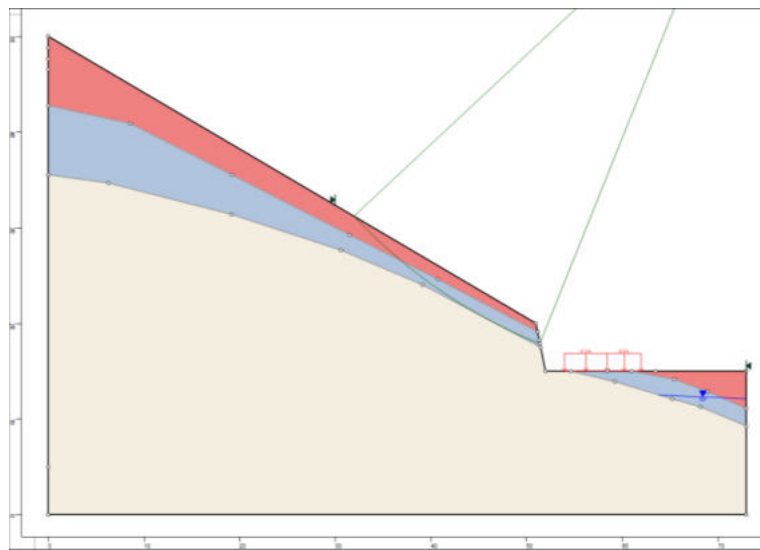
Ponto da Superfície Dir.: 41.2,25.7647

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraii Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.42507

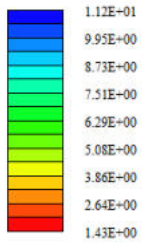
Centro: 170.472,227.238

Raio: 244.943

Ponto da Superfície Esq.: 18.678,35

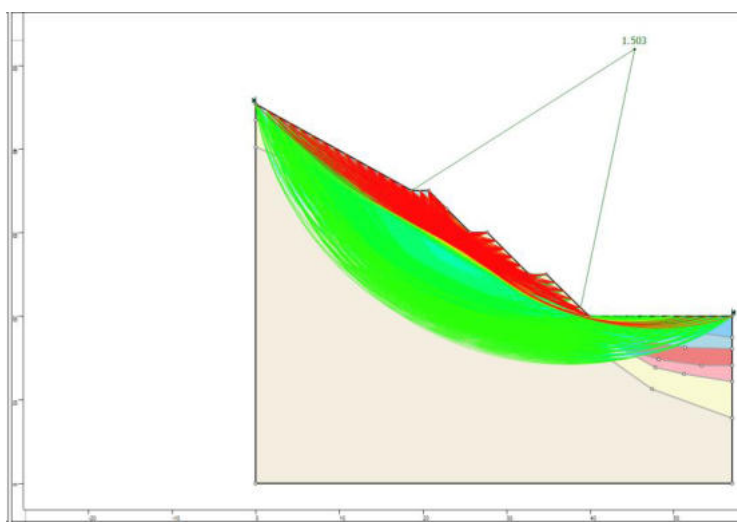
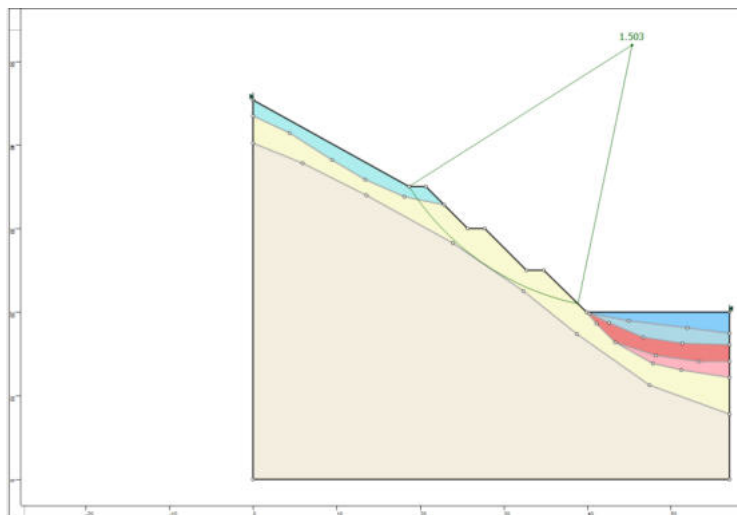
Ponto da Superfície Dir.: 39.8991,20

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



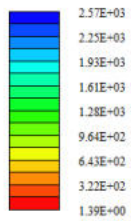
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

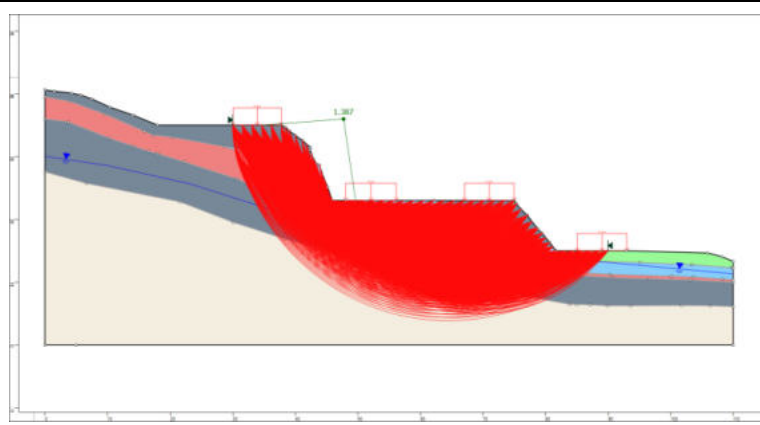
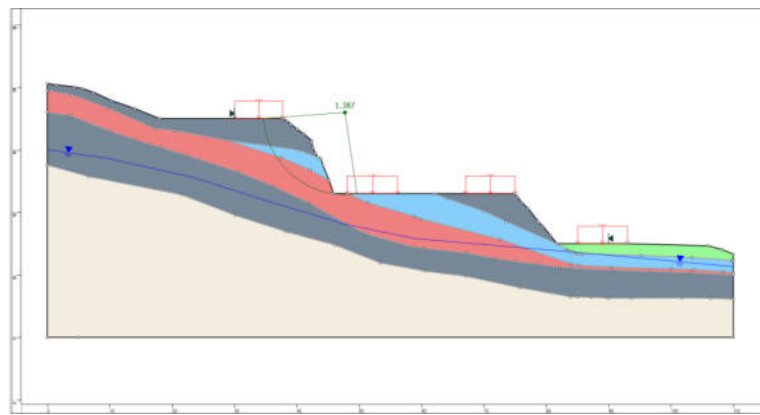
Método Bishop Simplificado:  
 FS Mín: 1.38709  
 Centro: 47.738,35.9731  
 Raio: 13.1136  
 Ponto da Superfície Esq.: 34.6606,35  
 Ponto da Superfície Dir.: 49.6524,23

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



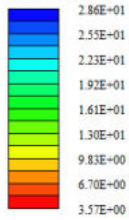
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

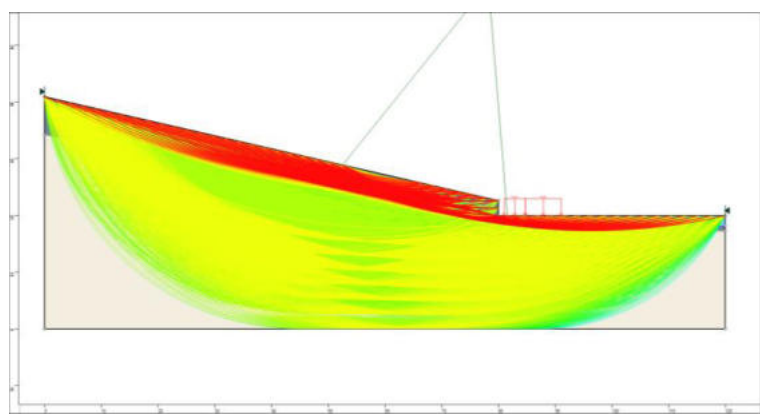
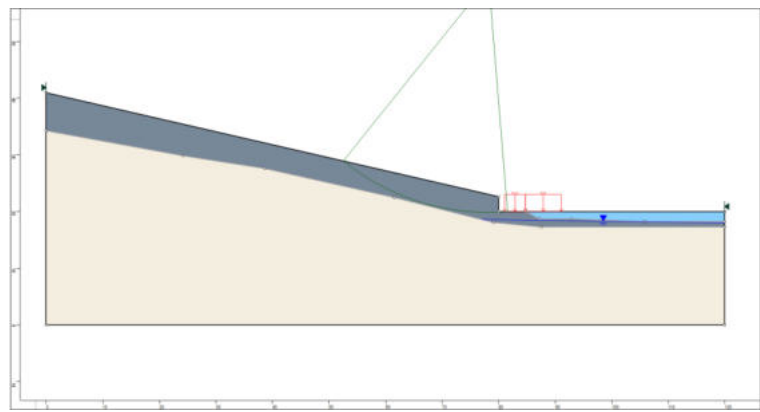
Método Bishop Simplificado:  
 FS Mín: 3.57008  
 Centro: 78.2589,60.7312  
 Raio: 40.9283  
 Ponto da Superfície Esq.: 52.579,28.8616  
 Ponto da Superfície Dir.: 81.5944,19.939

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 0.903279

Centro: 200.614,231.458

Raio: 259.999

Ponto da Superfície Esq.: 33.12,32.598

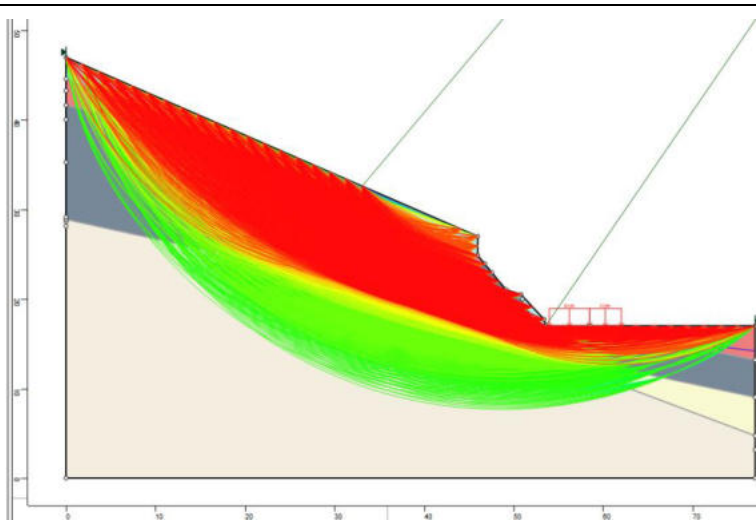
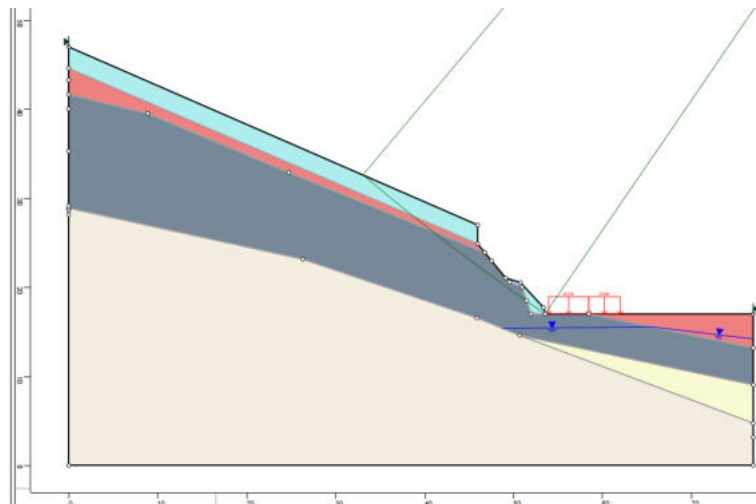
Ponto da Superfície Dir.: 53.6198,17

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.28125

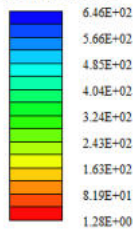
Centro: 29.1257,25.6657

Raio: 8.75427

Ponto da Superfície Esq.: 20.377,25.3528

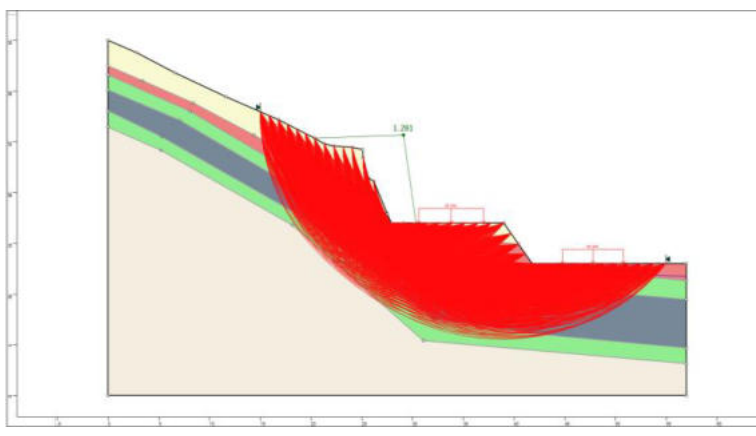
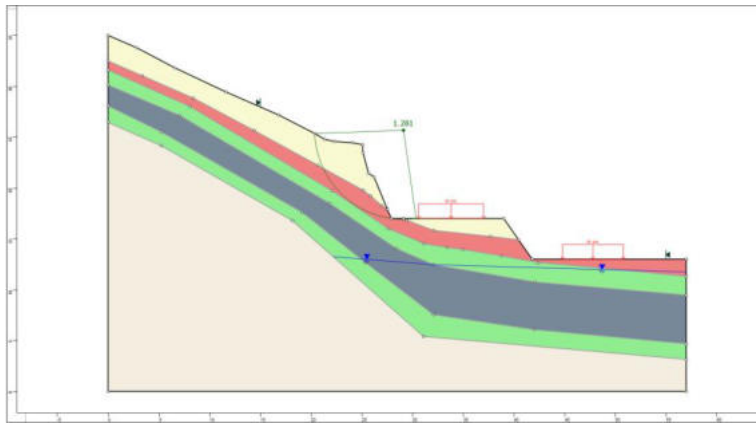
Ponto da Superfície Dir.: 30.368,17

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



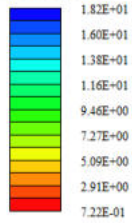
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

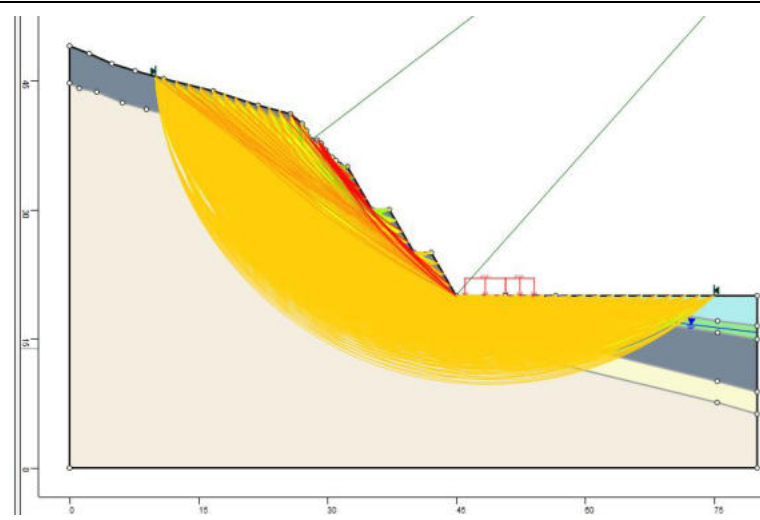
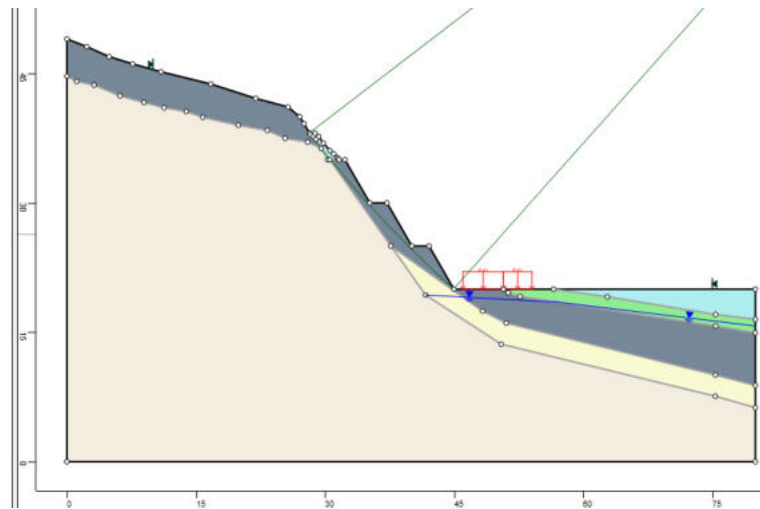
Método Bishop Simplificado:  
FS Mín: 0.722237  
Centro: 122.509,101.442  
Raio: 112.818  
Ponto da Superfície Esq.: 30.5673,36.0612  
Ponto da Superfície Dir.: 35.1937,30

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.1847

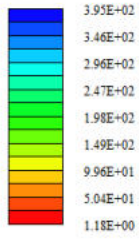
Centro: 34.5721,31.4239

Raio: 18.9814

Ponto da Superfície Esq.: 30.0052,13

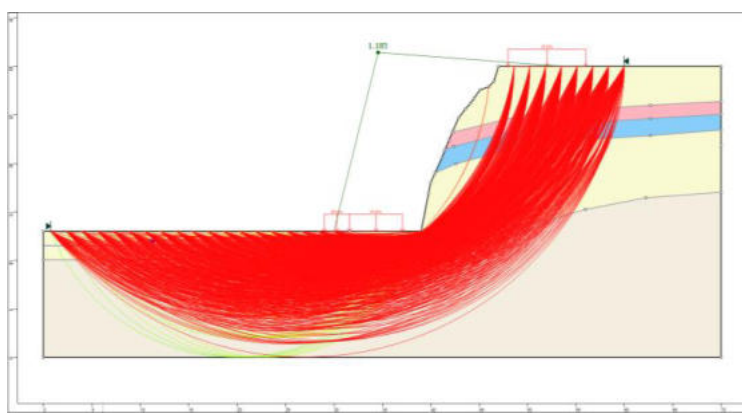
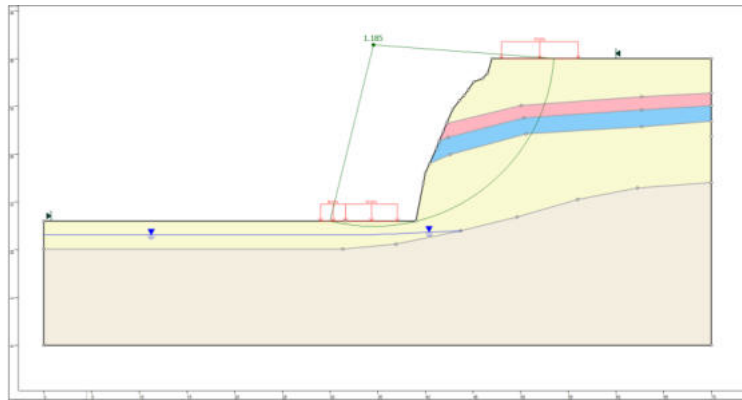
Ponto da Superfície Dir.: 53.5,30

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 1.20848

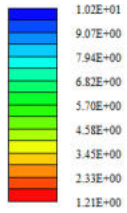
Centro: 49.3781,136.235

Raio: 21.875

Ponto da Superfície Esq.: 29.1157,127.992

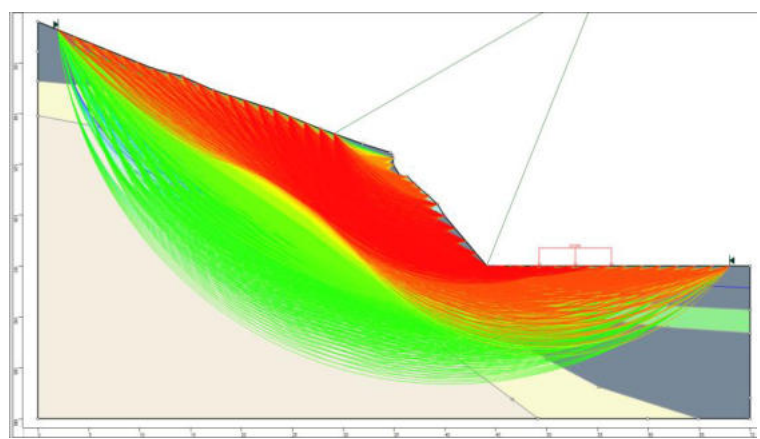
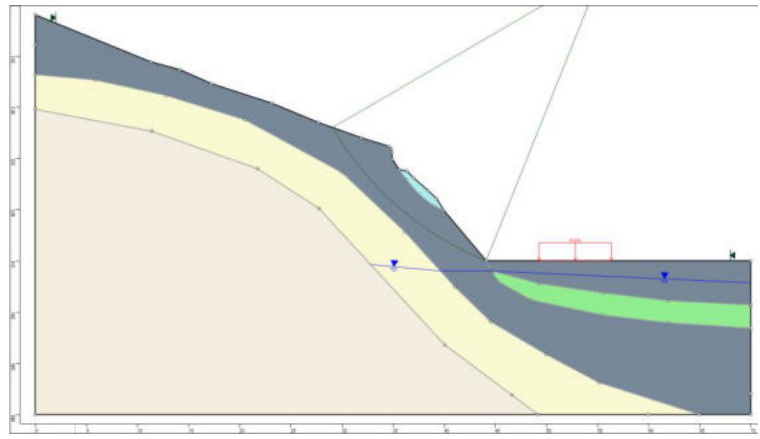
Ponto da Superfície Dir.: 44.1247,115

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraiii Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.893292

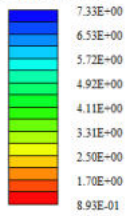
Centro: 97.8998,83.131

Raio: 66.6164

Ponto da Superfície Esq: 39.1008,51.8194

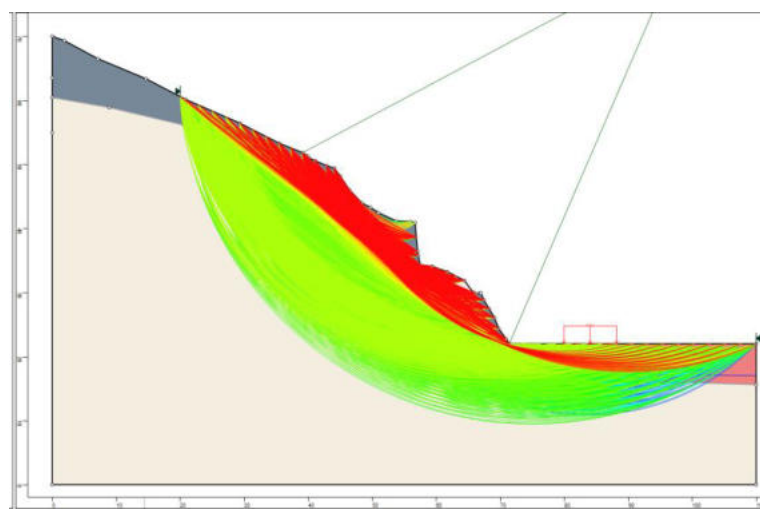
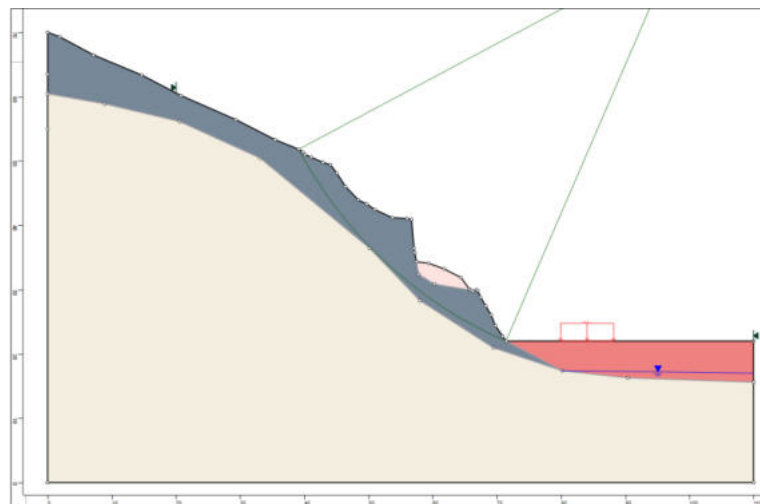
Ponto da Superfície Dir: 71.4283,22

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.780499

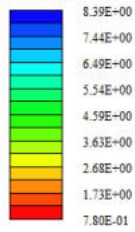
Centro: 239.694,269.506

Raio: 314.135

Ponto da Superfície Esq.: 27.5471,37.8284

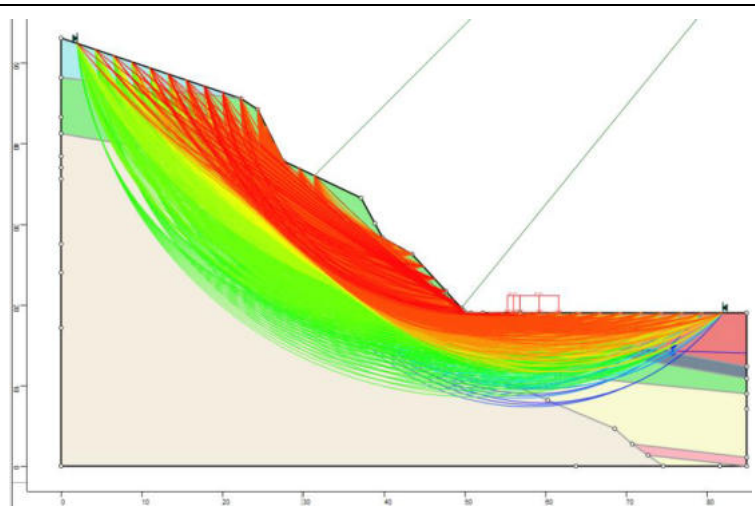
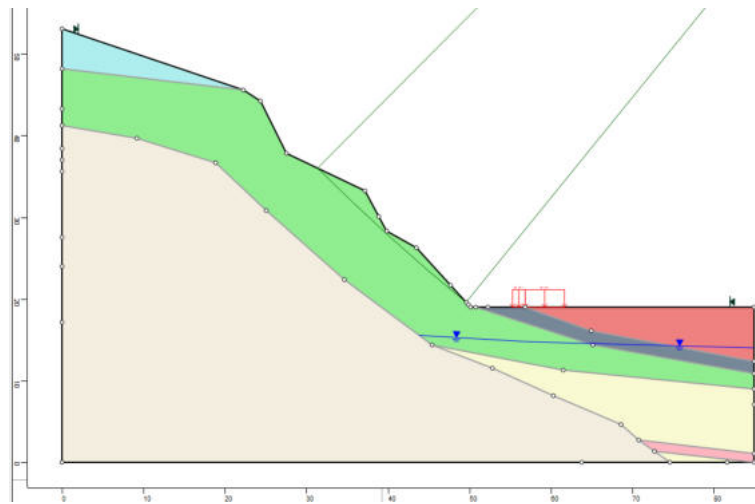
Ponto da Superfície Dir.: 50.1483,19

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.863607

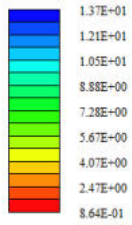
Centro: 182.698,150.773

Raio: 195.77

Ponto da Superfície Esq.: 29.3991,29.0137

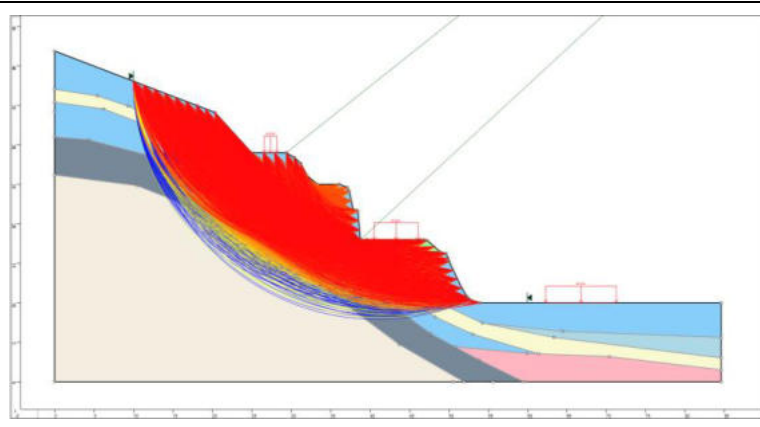
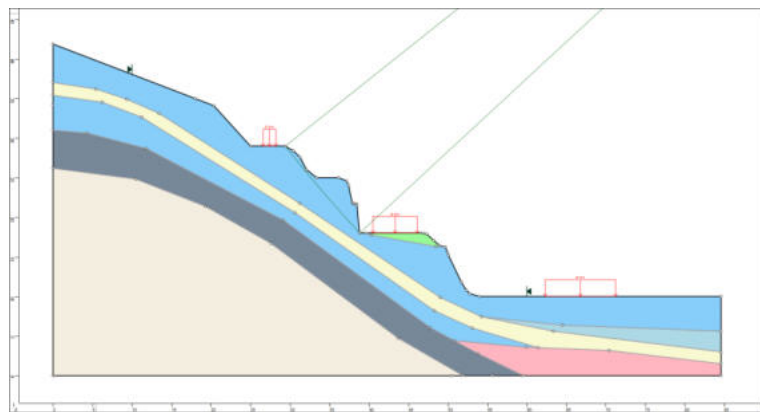
Ponto da Superfície Dir.: 38.811,18.0236

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mm: 0.906951

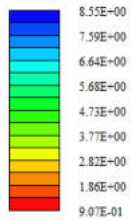
Centro: 158.861,149.796

Raio: 189.725

Ponto da Superfície Esq.: 11.4102,30.4073

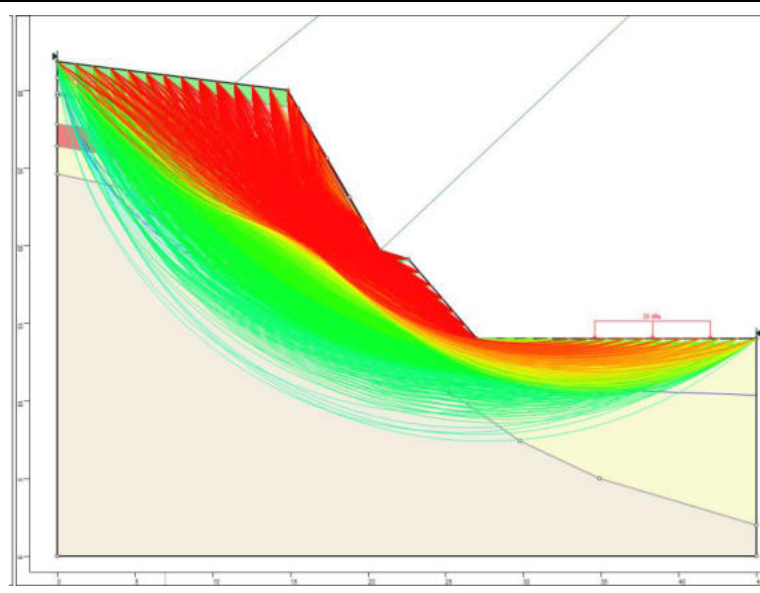
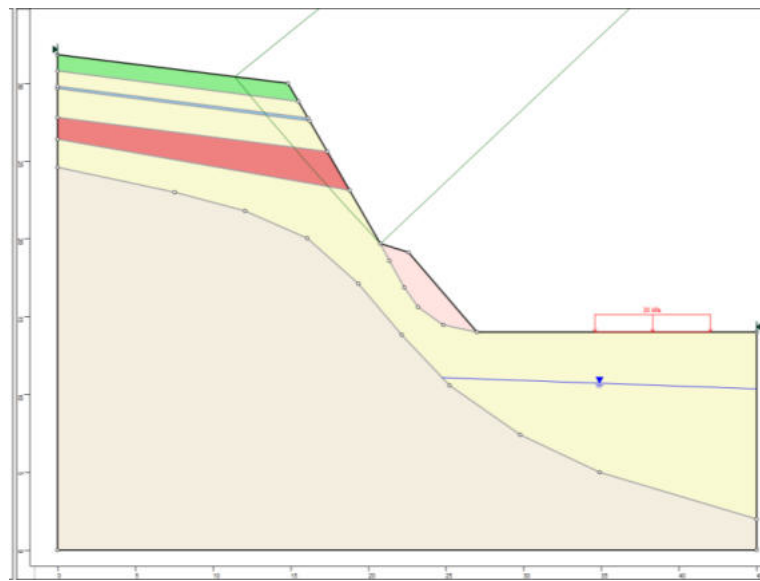
Ponto da Superfície Dir.: 20.7784,19.6861

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.14902

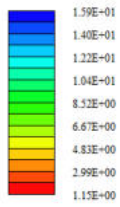
Centro: 227.329,329.388

Raio: 367.054

Ponto da Superfície Esq.: -16.5024,55.0252

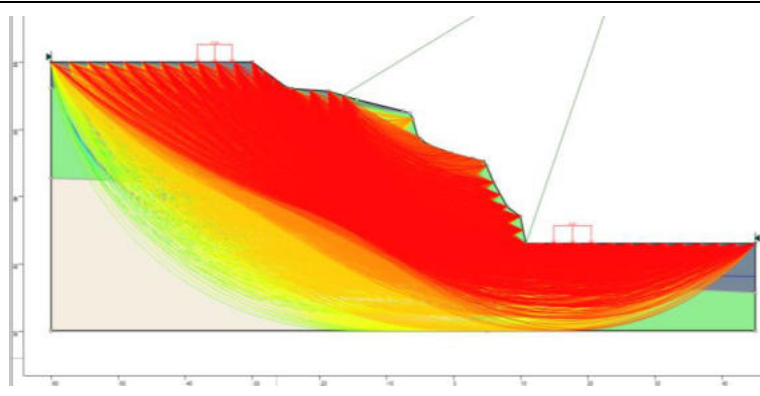
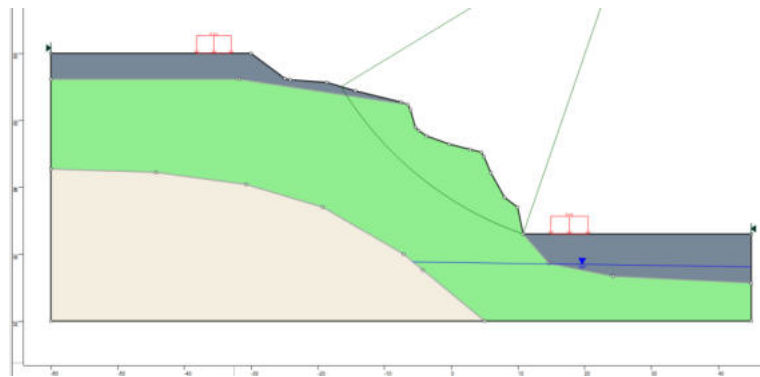
Ponto da Superfície Dir.: 10.8046,33

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 0.62783

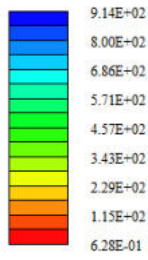
Centro: 47.7308,34.0476

Raio: 27.4247

Ponto da Superfície Esq.: 23.6087,21

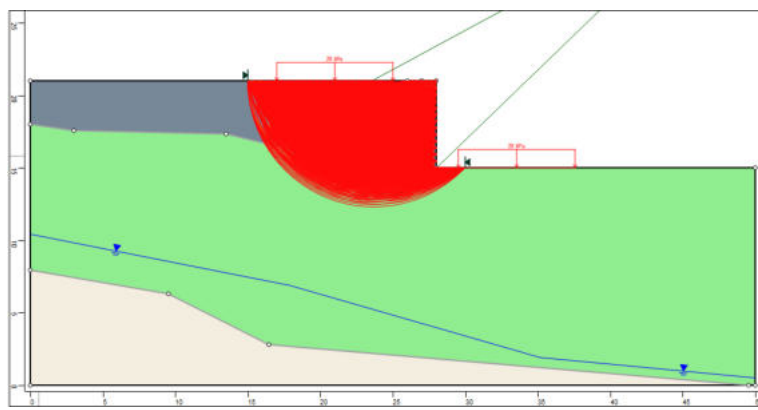
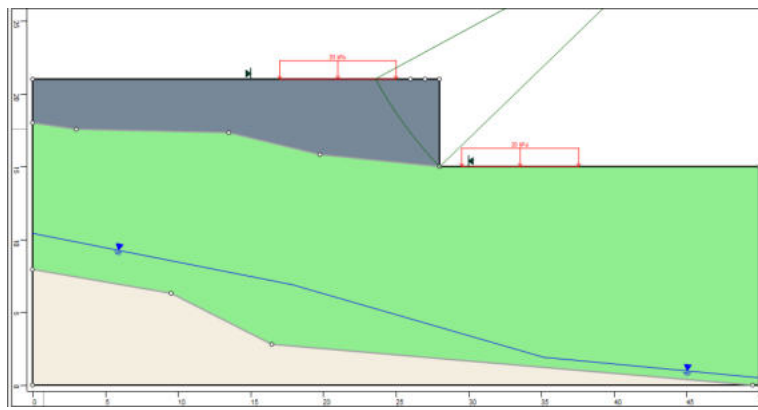
Ponto da Superfície Dir.: 28,15

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2023 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.762465

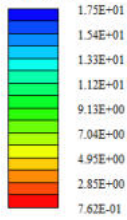
Centro: 150.186,133.258

Raio: 173.716

Ponto da Superfície Esq.: 18.4667,20

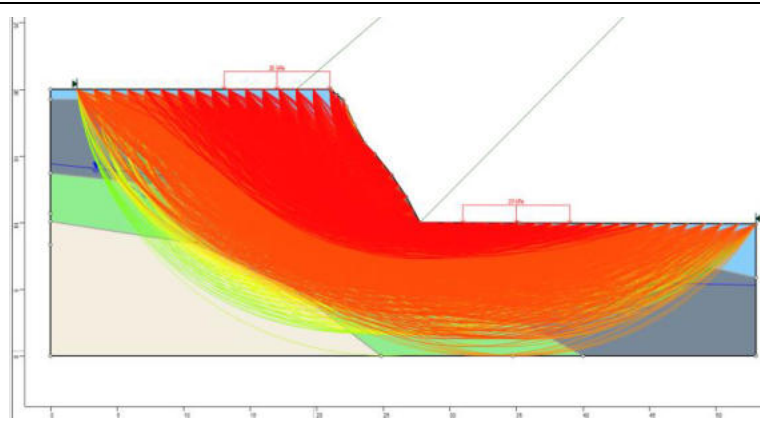
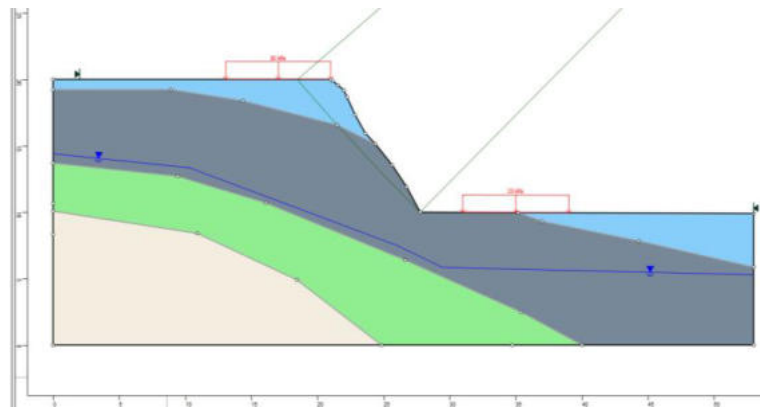
Ponto da Superfície Dir.: 27.7735,10

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraiii Mikota

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 1.32037

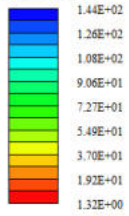
Centro: 32.2725,5571

Raio: 12,6608

Ponto da Superfície Esq.: 20,22,4356

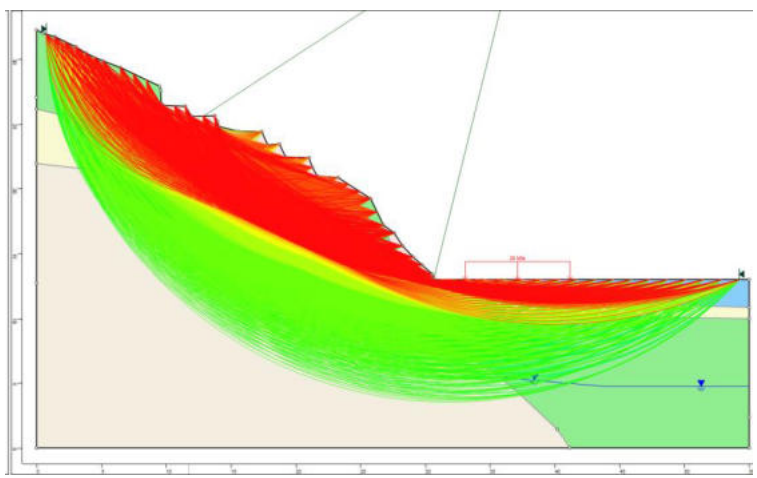
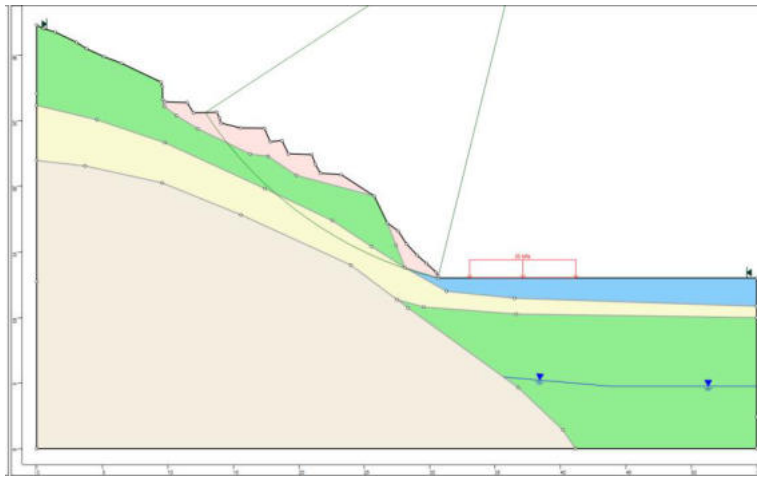
Ponto da Superfície Dir.: 30,6527,13

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.71029

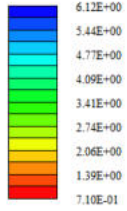
Centro: 198.836,179.204

Raio: 226.528

Ponto da Superfície Esq.: 30,28.1765

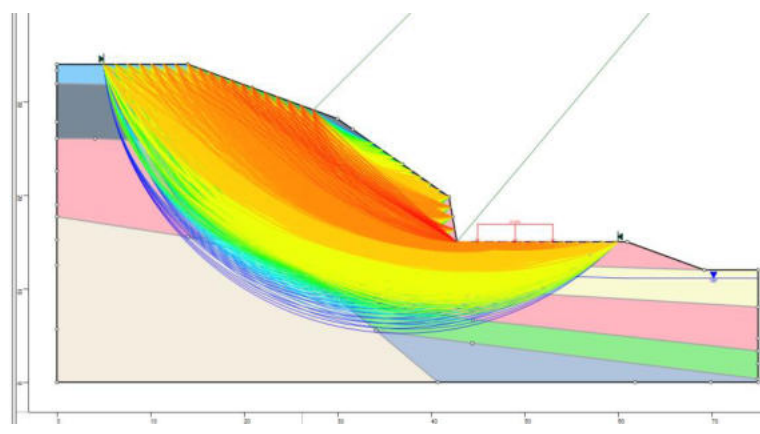
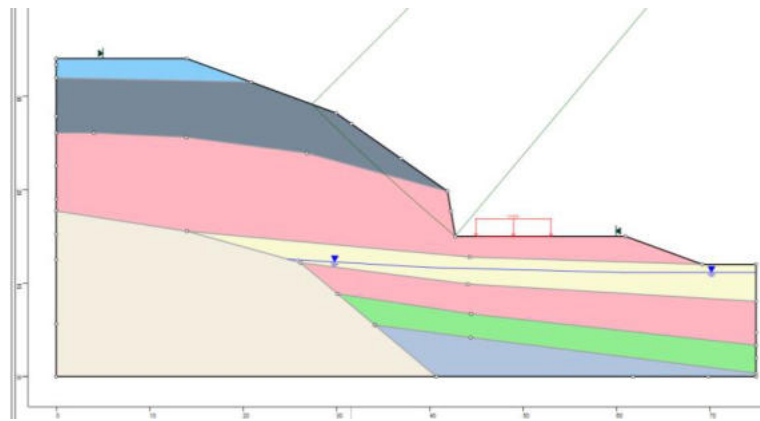
Ponto da Superfície Dir.: 42.7849,15

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikota

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.00783

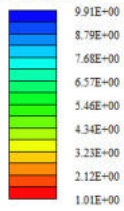
Centro: 18.6935,32.0311

Raio: 19.1188

Ponto da Superfície Esq.: 0,28.0209

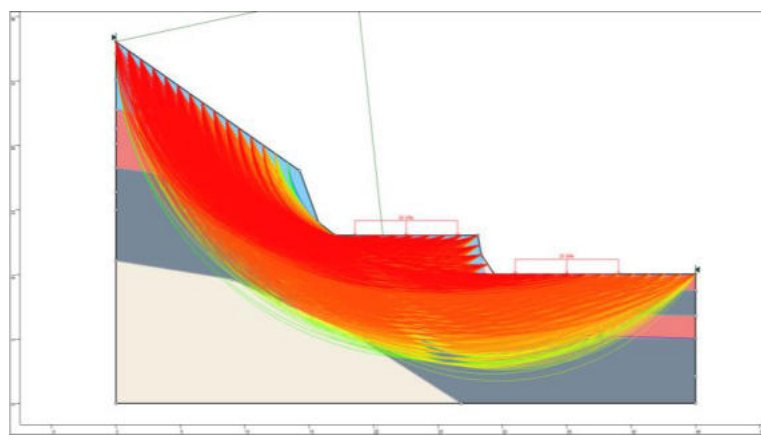
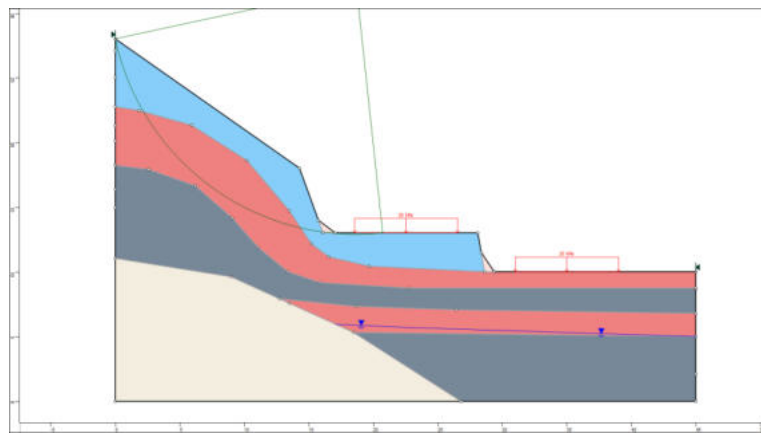
Ponto da Superfície Dir.: 20.7282,13.0209

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



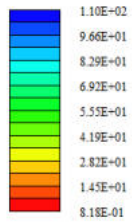
# HYRCAN 2.0

©2024 Roozbeh Geratli Mikola

## Factor de Segurança

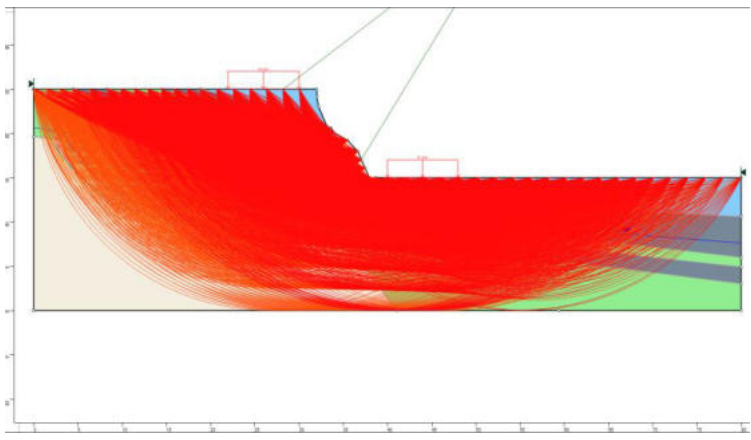
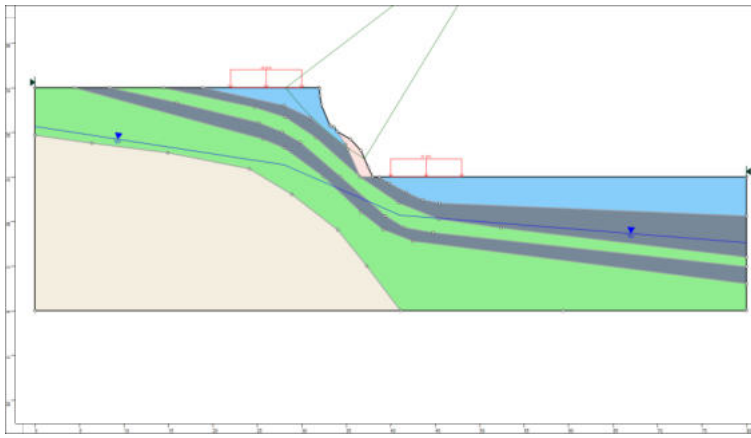
Método Bishop Simplificado:  
 FS Min: 0.817864  
 Centro: 155.759,139.856  
 Raio: 171.642  
 Ponto da Superfície Esq.: 28.2086,25  
 Ponto da Superfície Dir.: 37.9796,15

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geratli Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 1.85692

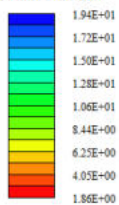
Centro: 72.182,57,2703

Raio: 40.5794

Ponto da Superfície Esq.: 42.1318,30

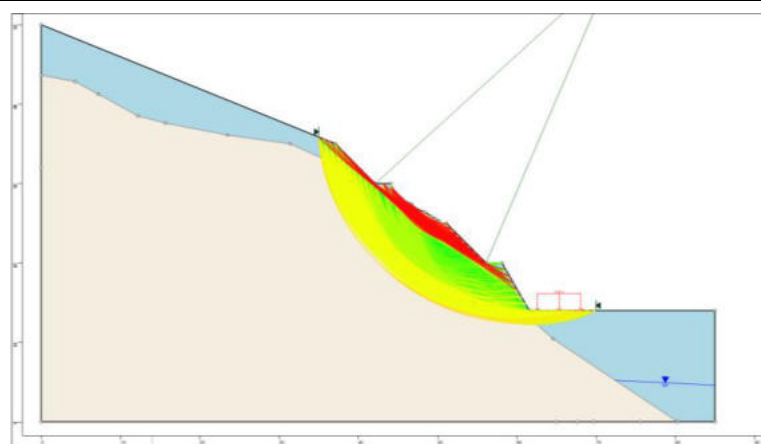
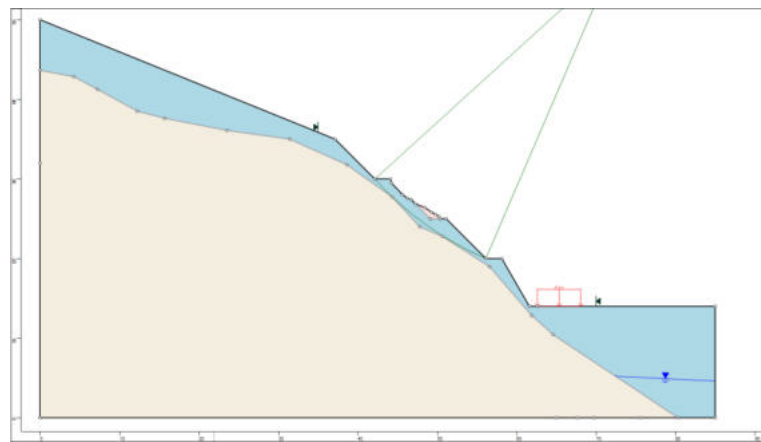
Ponto da Superfície Dir.: 56.1318,20

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



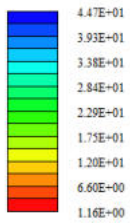
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

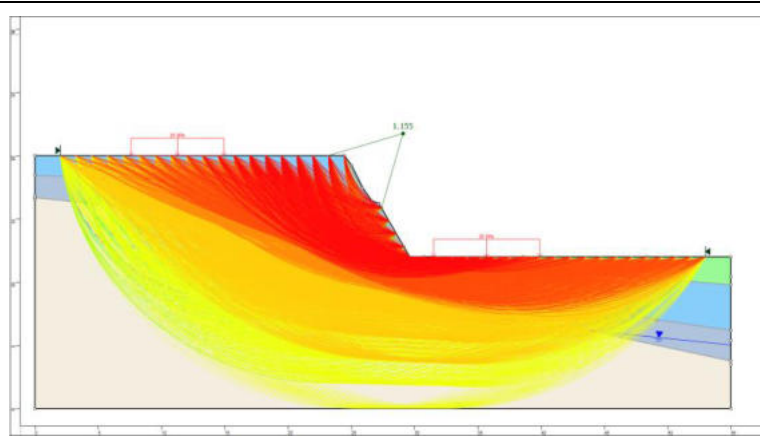
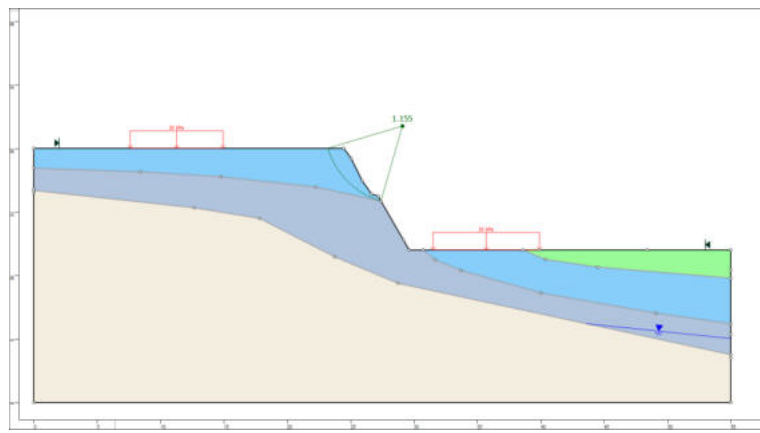
Método Bishop Simplificado:  
 FS Mín: 1.15521  
 Centro: 29.0941,21.7481  
 Raio: 6.13857  
 Ponto da Superfície Esq.: 23.2097,20  
 Ponto da Superfície Dir.: 27.3966,15.8489

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Gerani Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 3.63129

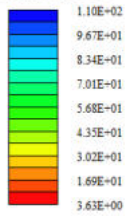
Centro: 23.7004,16.5906

Raio: 6.9609

Ponto da Superfície Esq.: 17.737,13

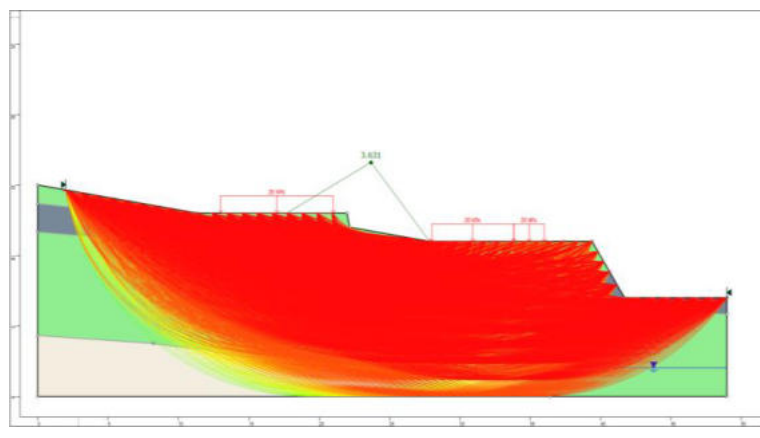
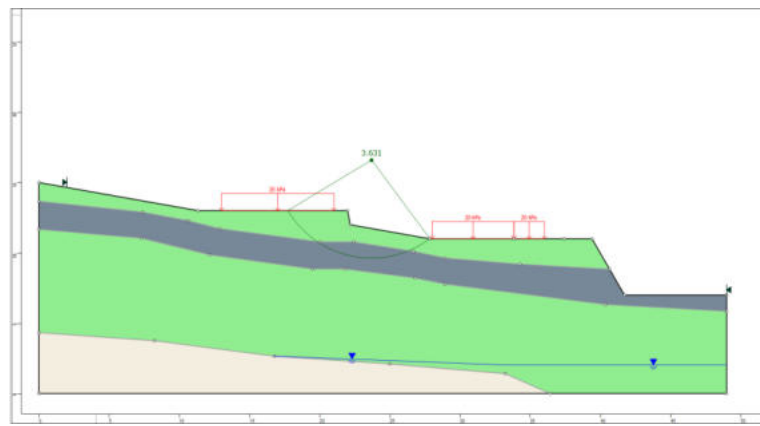
Ponto da Superfície Dir.: 27.8476,11

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 1.27172

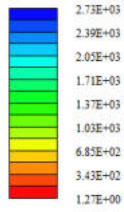
Centro: 26.2855,22.0142

Raio: 10.3093

Ponto da Superfície Esq.: 16.1749,20

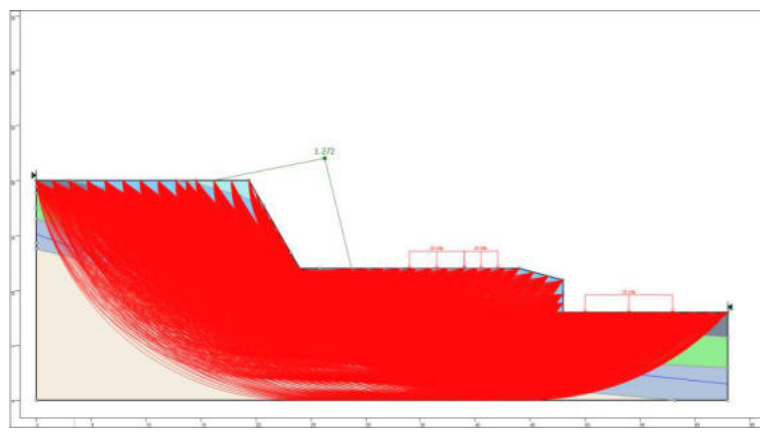
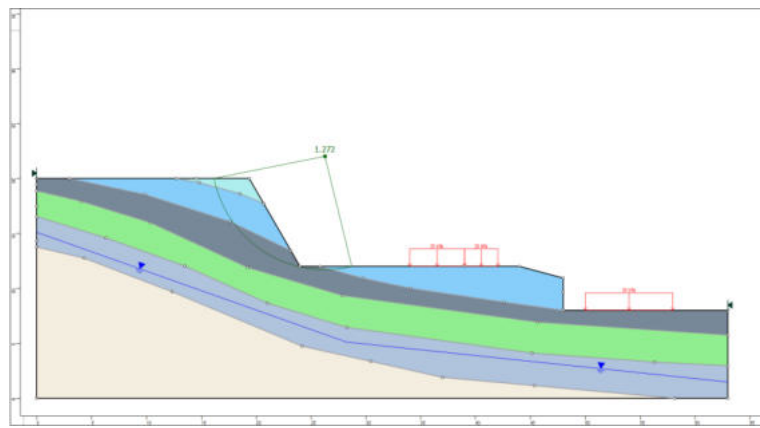
Ponto da Superfície Dir.: 28.7343,12

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 1.06867

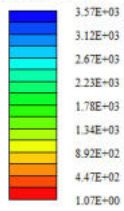
Centro: 21.6418,24.9355

Raio: 9.40456

Ponto da Superfície Esq.: 13.6364,20

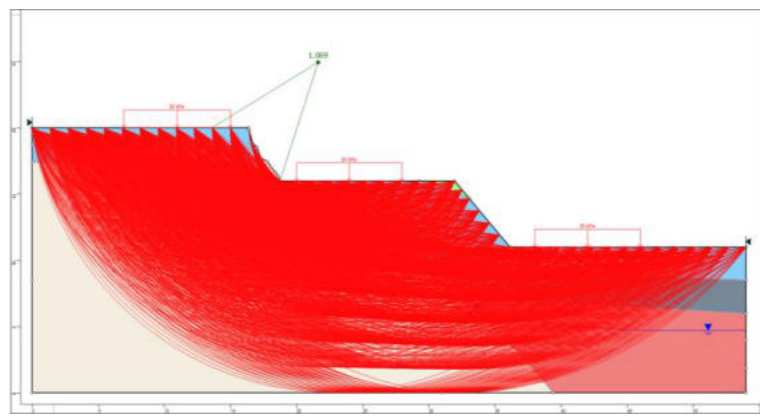
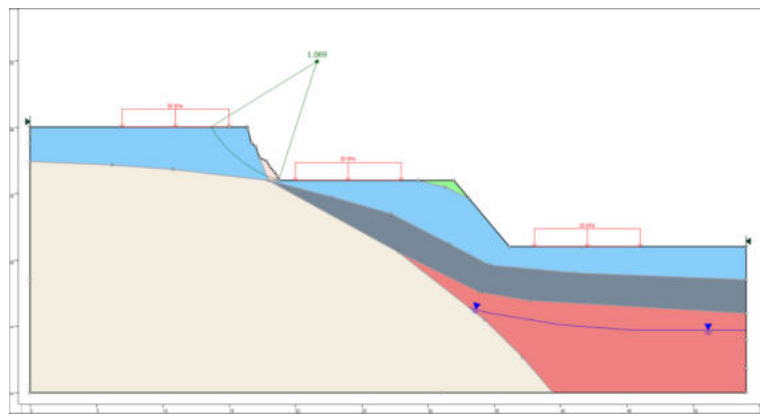
Ponto da Superfície Dir.: 18.7523,15.9858

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 3.66694

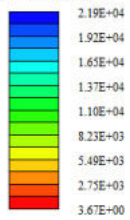
Centro: 25.2067,44.6804

Raio: 31.4415

Ponto da Superfície Esq.: 2,23.4669

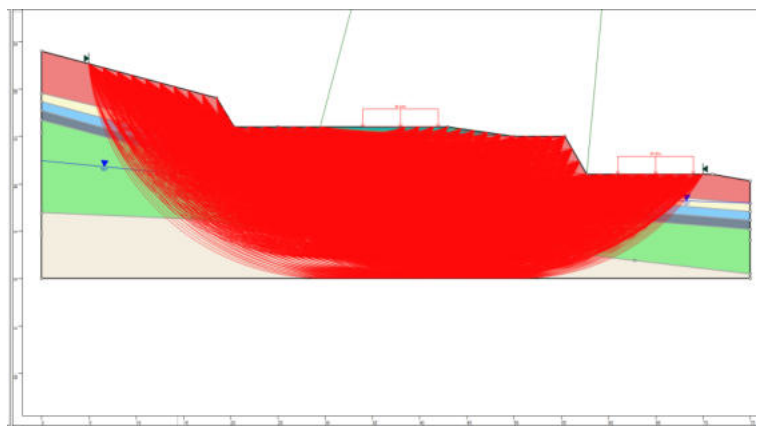
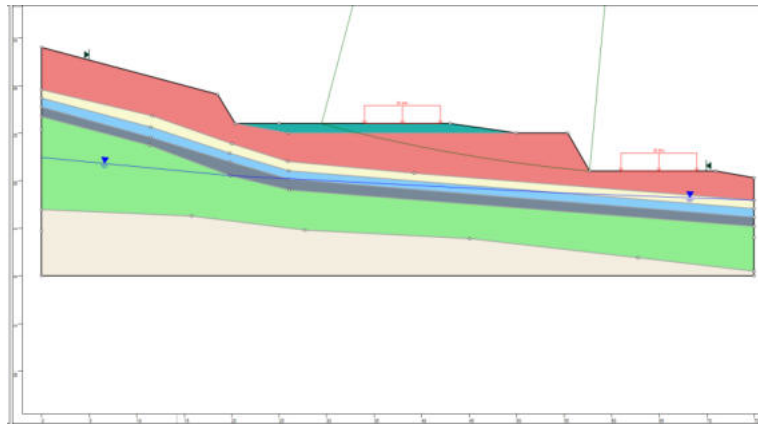
Ponto da Superfície Dir.: 38.0909,16

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.39202

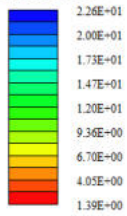
Centro: 63.891,22.9314

Raio: 13.5042

Ponto da Superfície Esq.: 51.3195,18

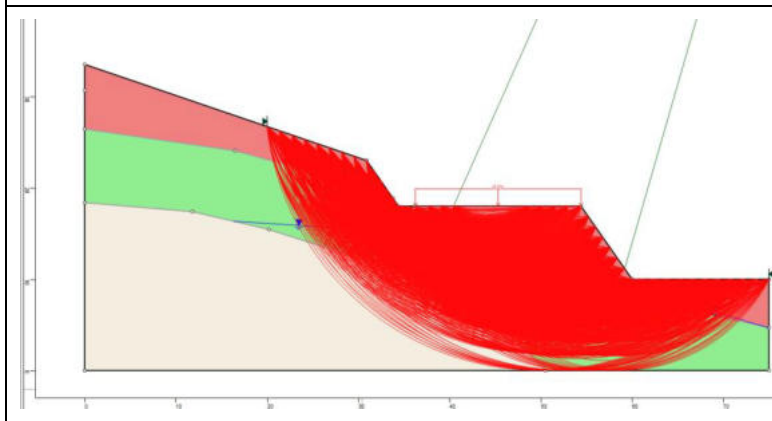
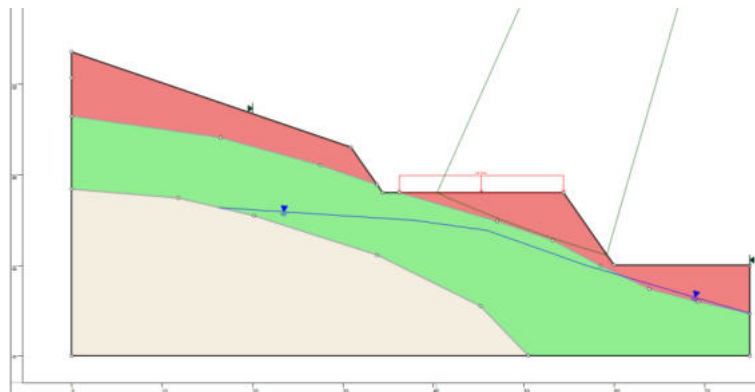
Ponto da Superfície Dir.: 60,10

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Gerani Mikota

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 1.41394

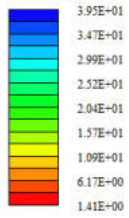
Centro: 65,1738,44.9877

Raio: 26.7432

Ponto da Superfície Esq.: 40,35.961

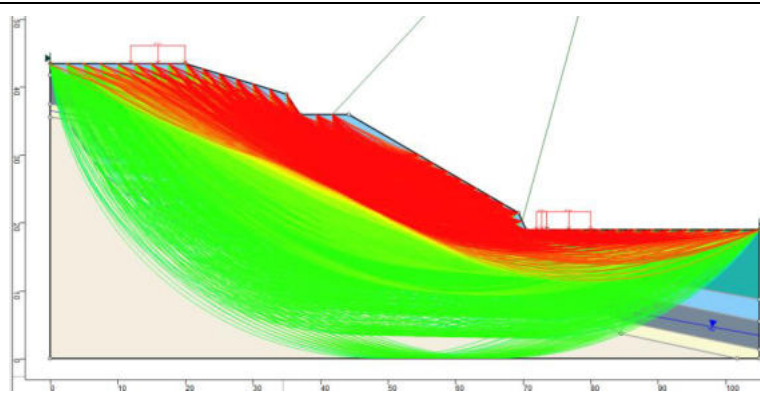
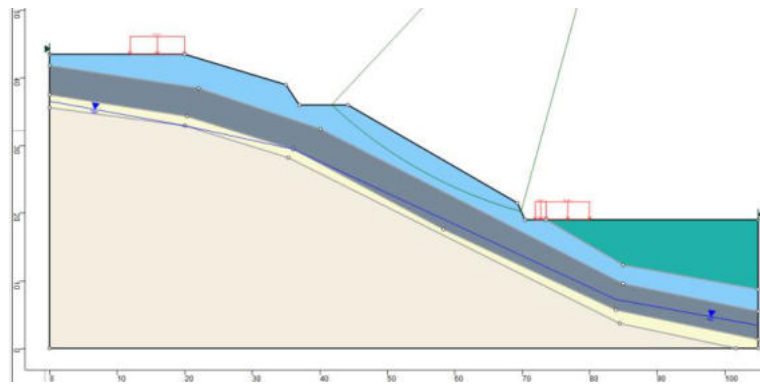
Ponto da Superfície Dir.: 71.4857,19

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.19627

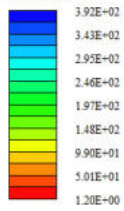
Centro: 31.9731,45.8219

Raio: 7.10619

Ponto da Superfície Esq.: 25.7155,42.4544

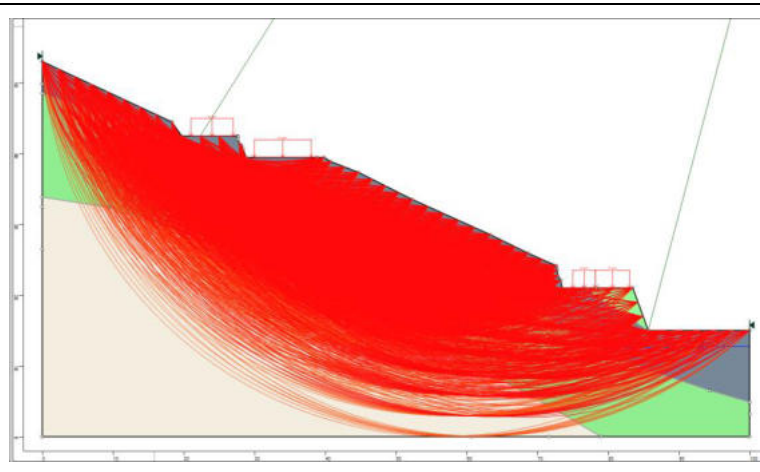
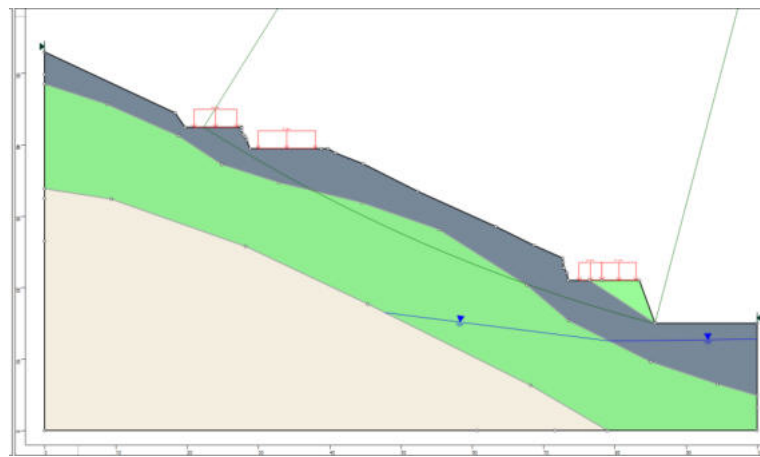
Ponto da Superfície Dir.: 28.8184,39.4544

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.00697

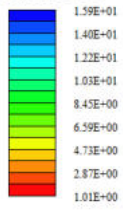
Centro: 241.761,170.086

Raio: 258.915

Ponto da Superfície Esq.: 19.8049,36.7728

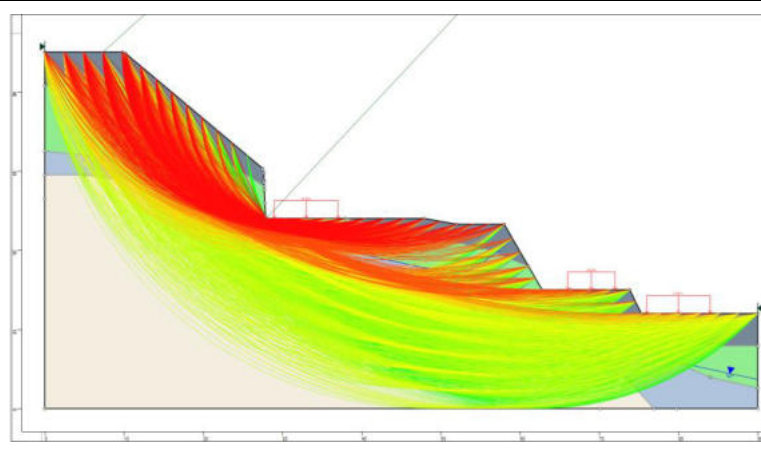
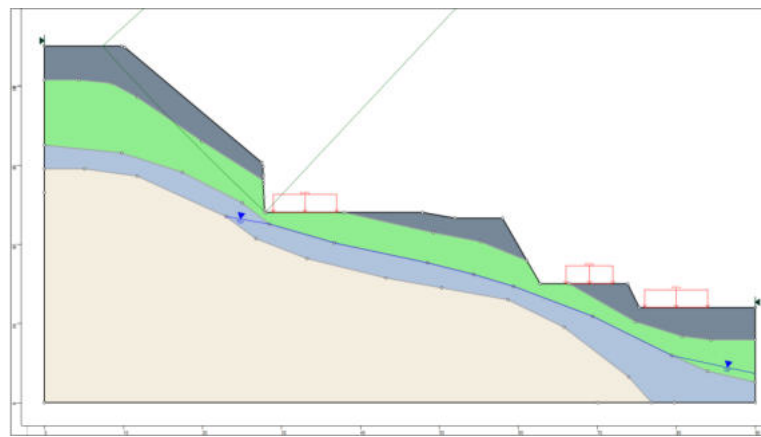
Ponto da Superfície Dir.: 27.9952,24

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraii Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 3.89787

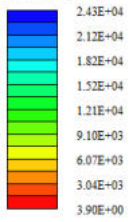
Centro: 57.4759,128.069

Raio: 118.157

Ponto da Superfície Esq.: 26.666,14

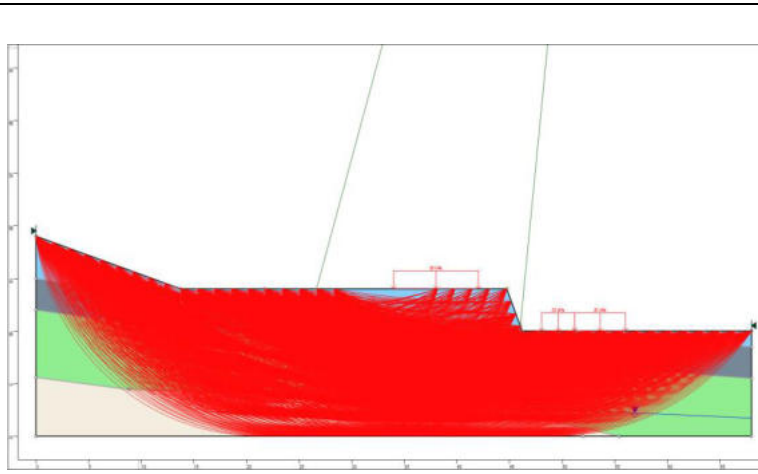
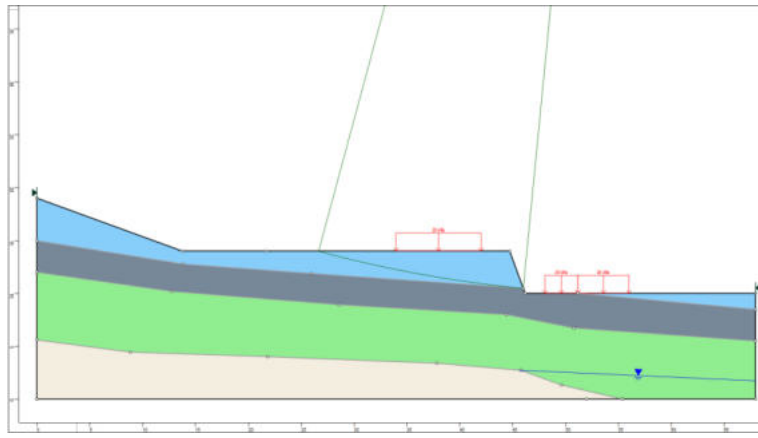
Ponto da Superfície Dir.: 46.0227,10.4688

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



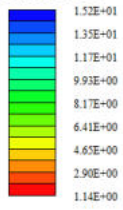
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

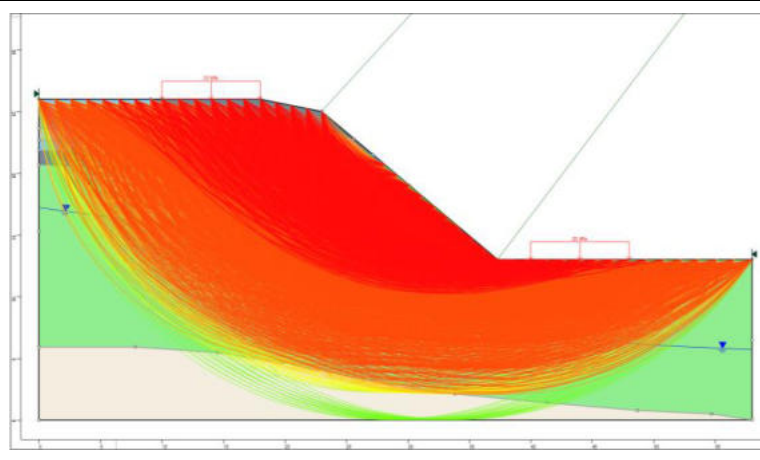
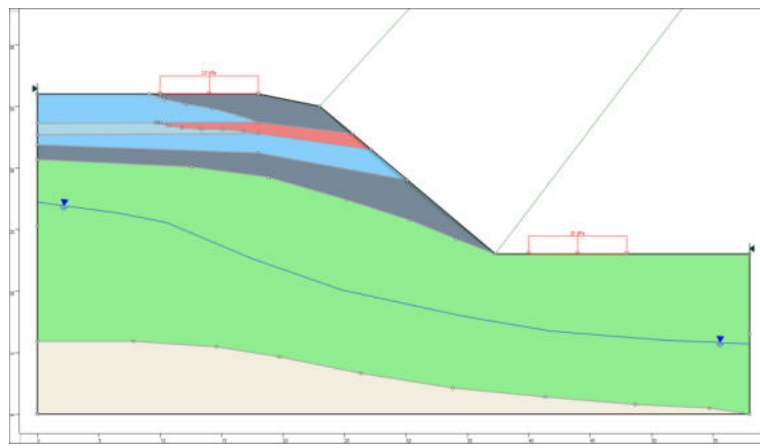
Método Bishop Simplificado:  
FS Min: 1.13549  
Centro: 158,751,172,26  
Raio: 200,284  
Ponto da Superfície Esq.: 23,25  
Ponto da Superfície Dir.: 37,301,13

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.25864

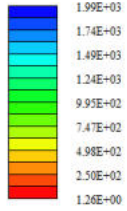
Centro: 43.6921,34.3714

Raio: 24.3503

Ponto da Superfície Esq.: 25.6667,18

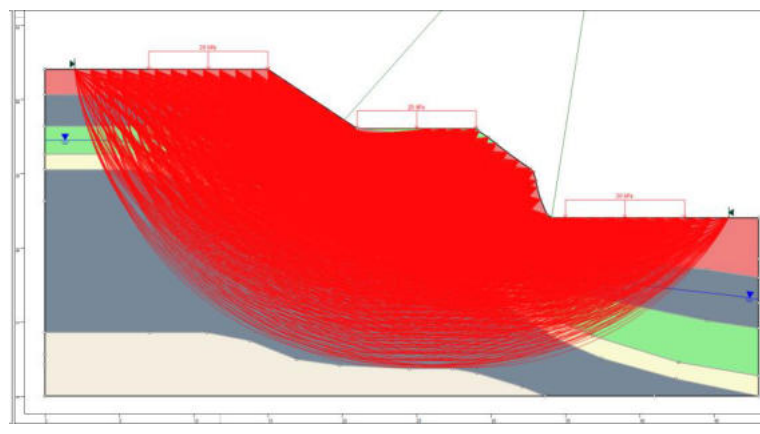
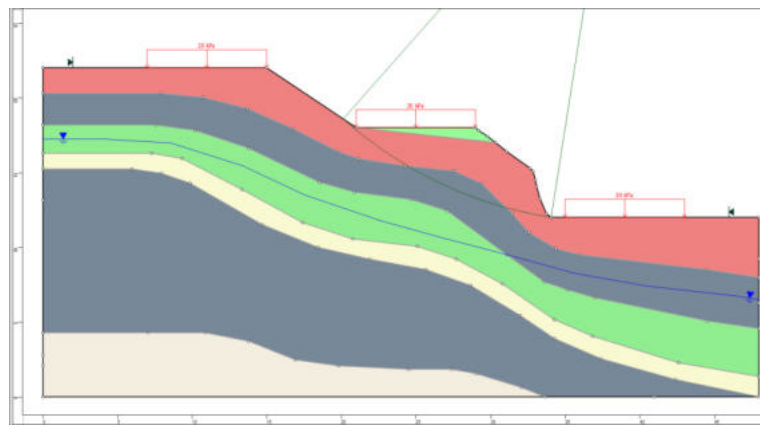
Ponto da Superfície Dir.: 34.0765,12

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Gerani Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 1.39984

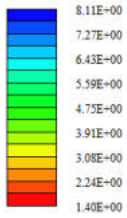
Centro: 20.2812,19.9751

Raio: 4.11627

Ponto da Superfície Esq.: 16.4239,18.538

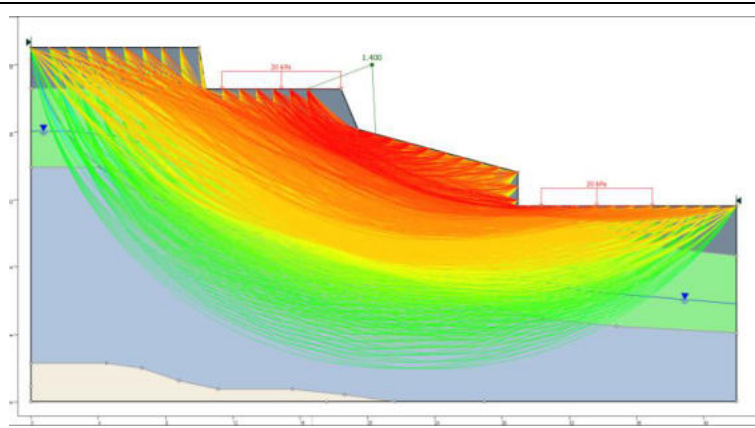
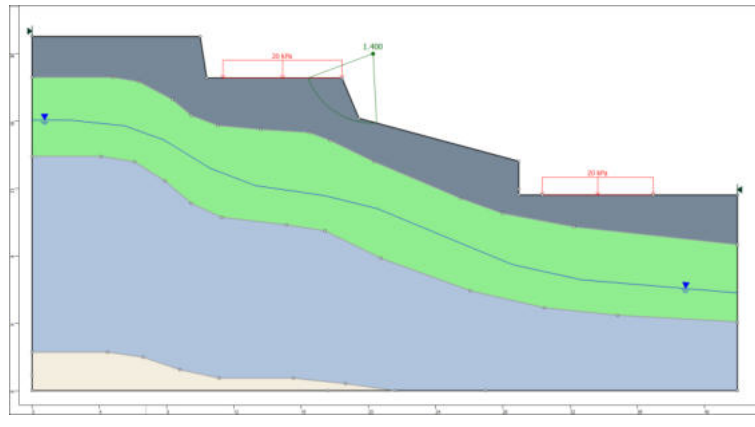
Ponto da Superfície Dir.: 20.499,15.8646

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.852088

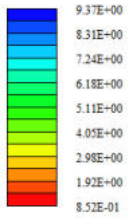
Centro: 34.6206,33.4076

Raio: 23.5657

Ponto da Superfície Esq.: 14,22

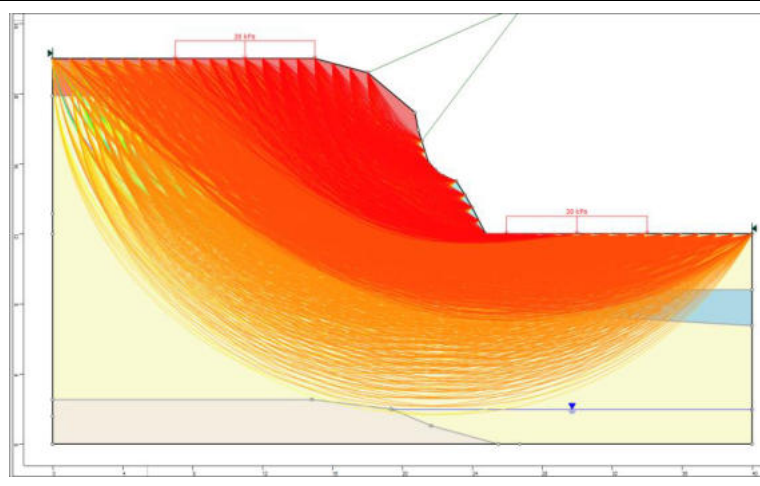
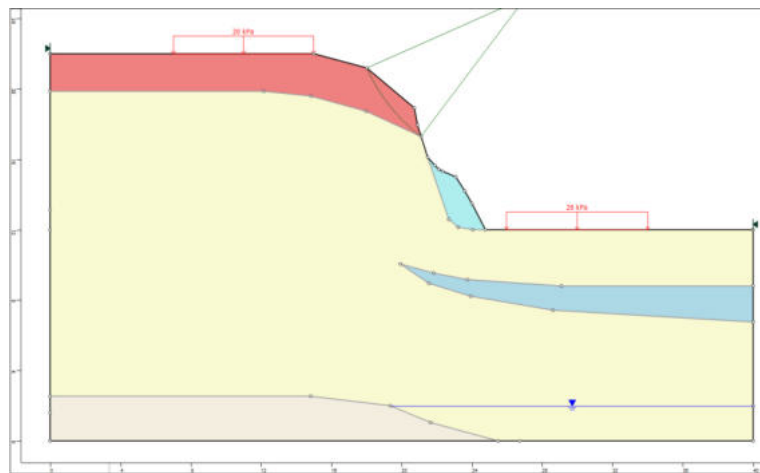
Ponto da Superfície Dir.: 24.7688,12

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.1471

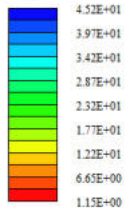
Centro: 30.8374,31.9448

Raio: 21.3014

Ponto da Superfície Esq.: 12,22

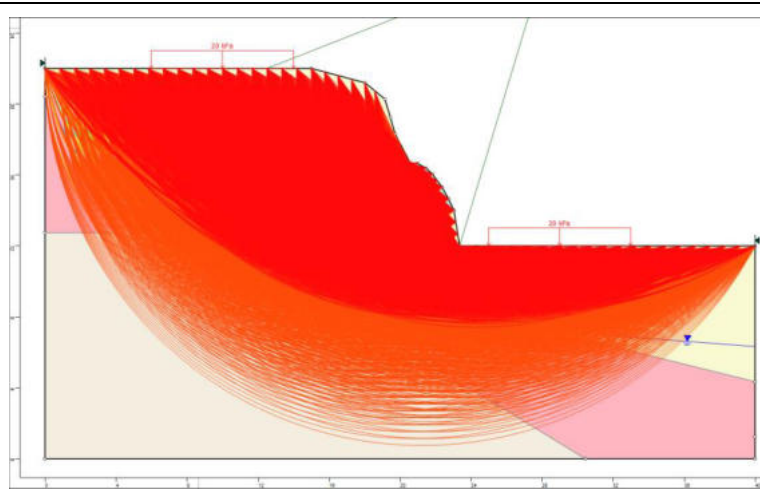
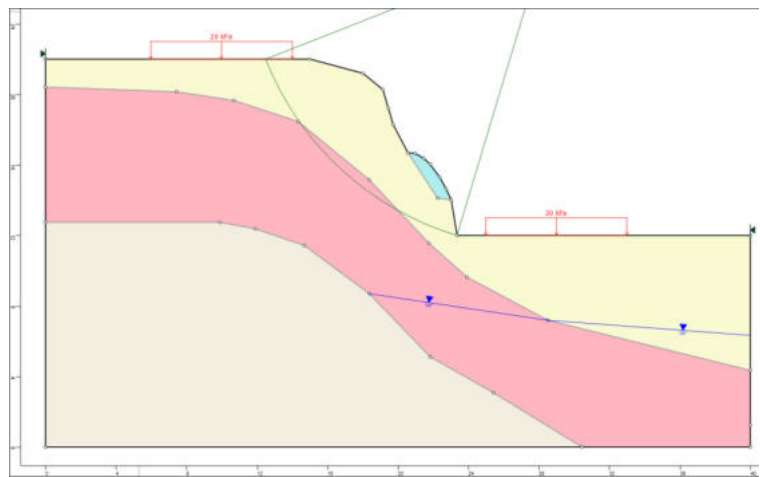
Ponto da Superfície Dir.: 23.3573,12

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.50726

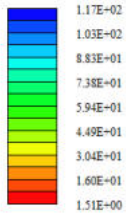
Centro: 83.1396,39.7282

Raio: 18.6969

Ponto da Superfície Esq.: 65.926,32.4296

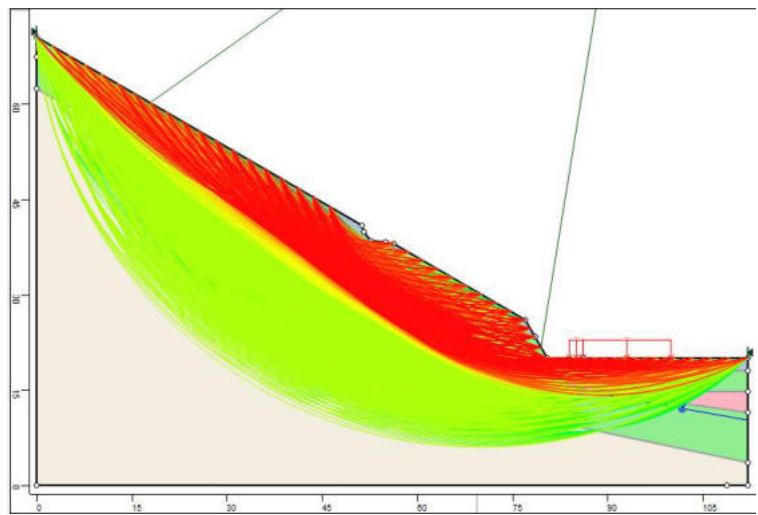
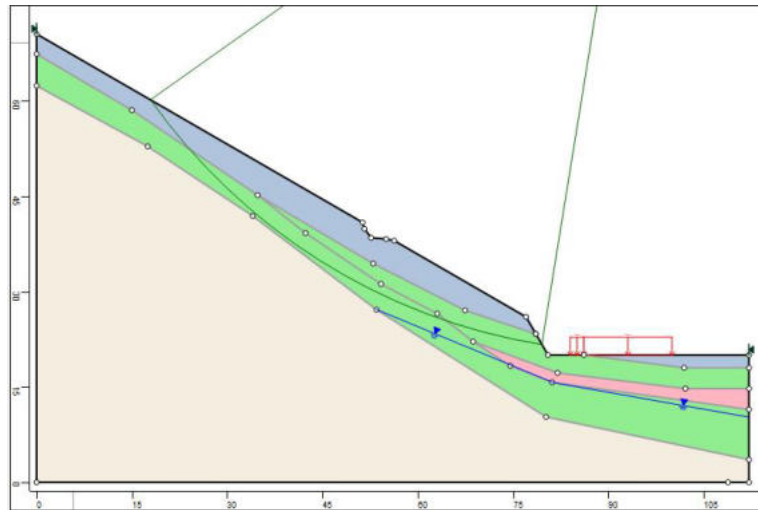
Ponto da Superfície Dir.: 79.7327,21.3442

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.14273

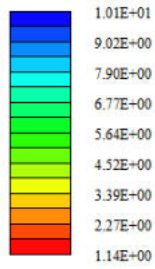
Centro: 90.2258,119.109

Raio: 120.193

Ponto da Superfície Esq.: 19.2536,22.1071

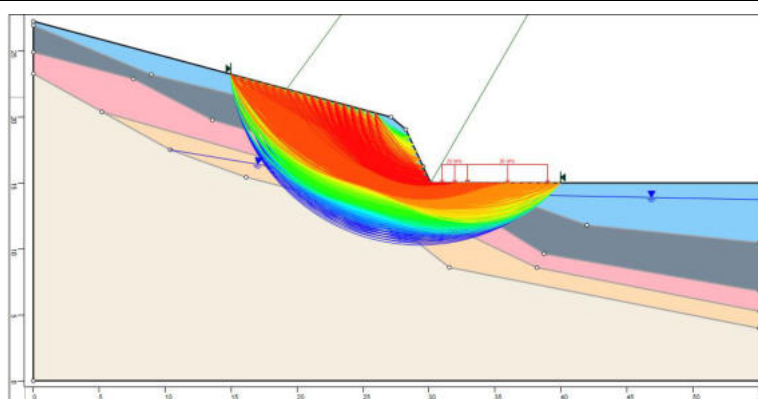
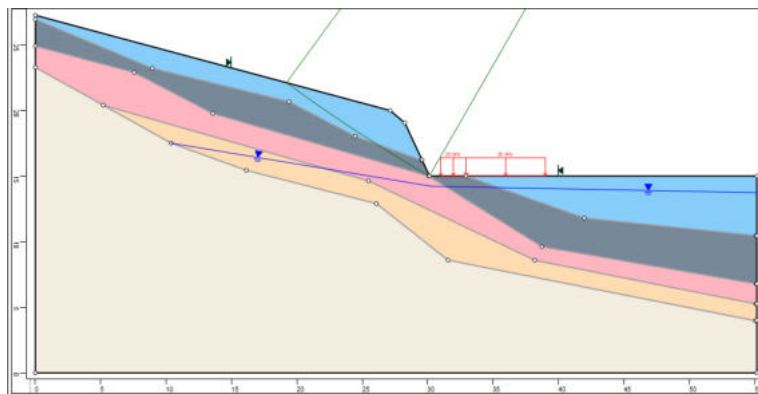
Ponto da Superfície Dir.: 30.1613,15

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 1.50031

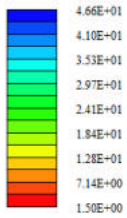
Centro: 85.7863,142.47

Raio: 135.099

Ponto da Superfície Esq.: 24.6415,22

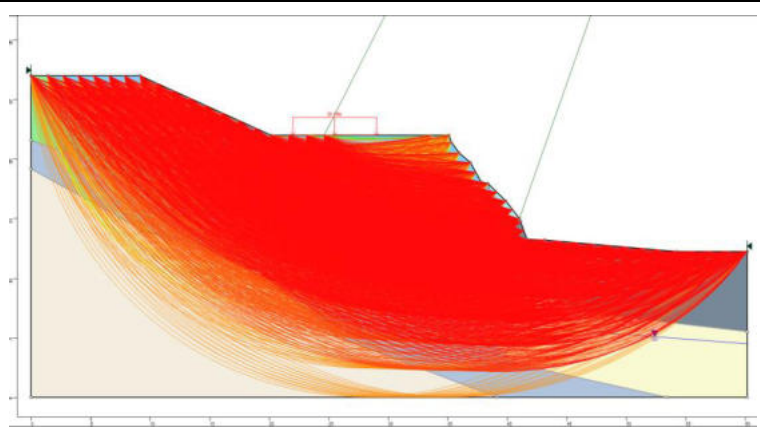
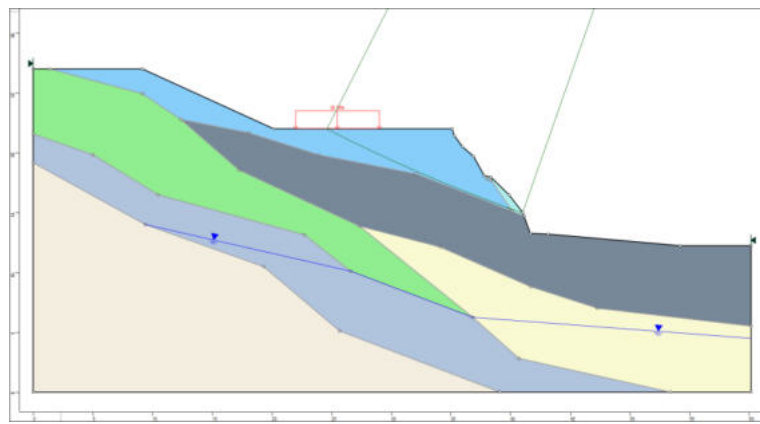
Ponto da Superfície Dir.: 41.0302,15

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mm: 1.45383

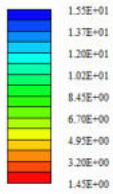
Centro: 75.2309,92.1844

Raio: 91.9488

Ponto da Superfície Esq.: 18.9374,19.4821

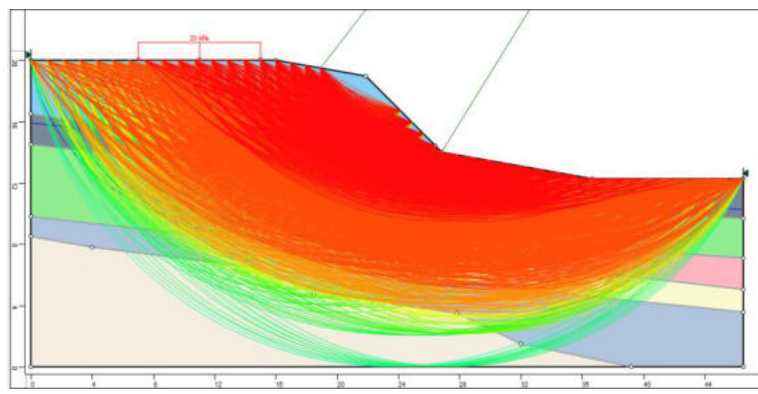
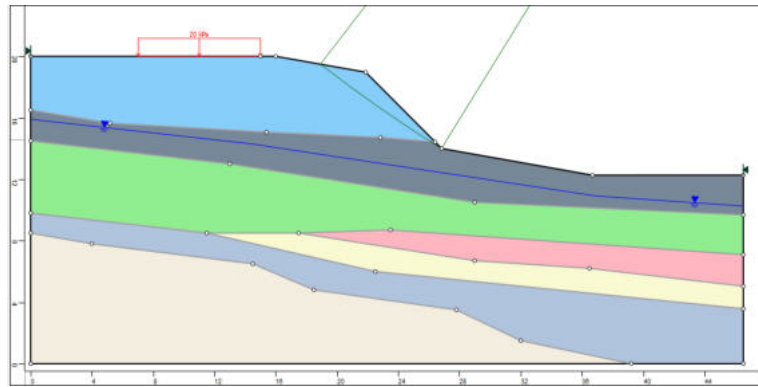
Ponto da Superfície Dir.: 26.8388,14

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Mín: 1.03344

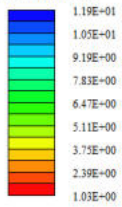
Centro: 85.0932,97.9455

Raio: 94.2127

Ponto da Superfície Esq.: 25.4031,25.0543

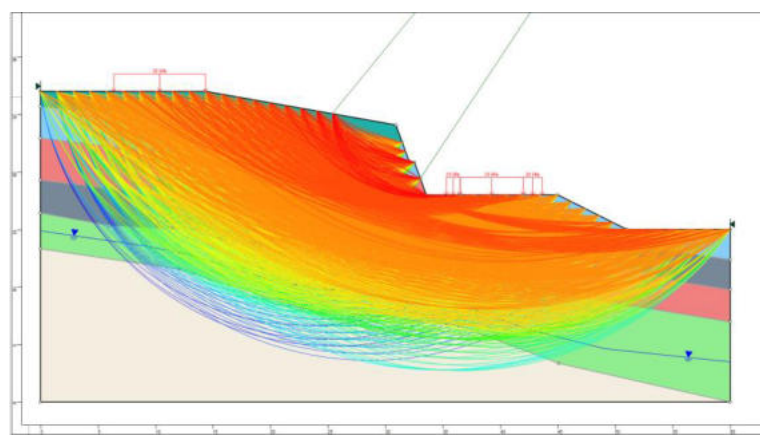
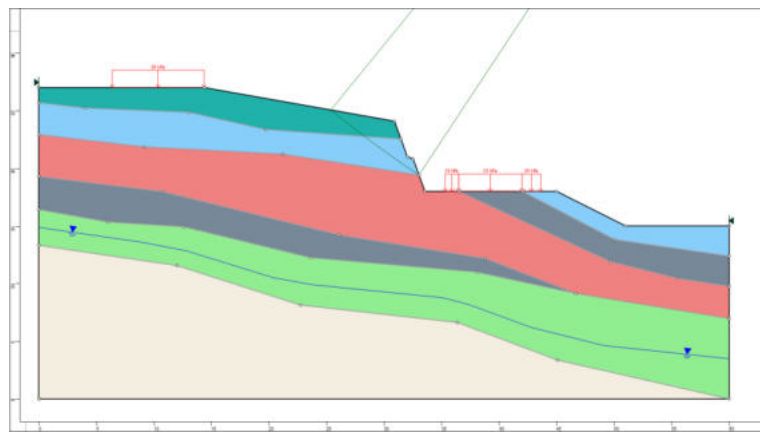
Ponto da Superfície Dir.: 33.0535,19.4095

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



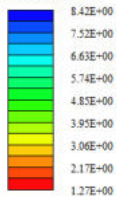
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

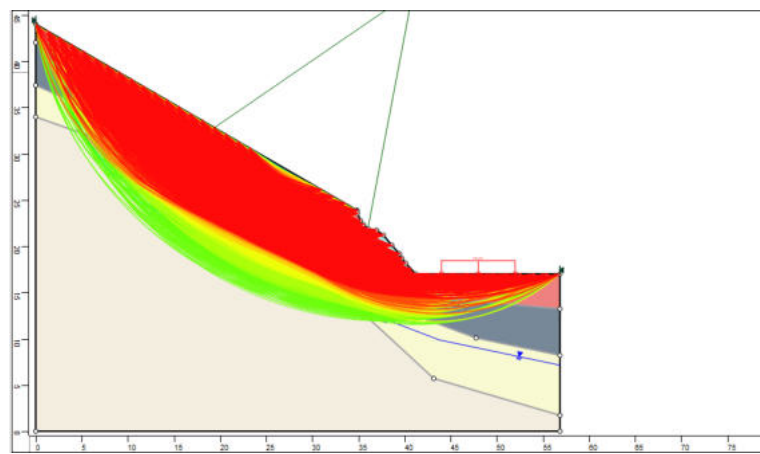
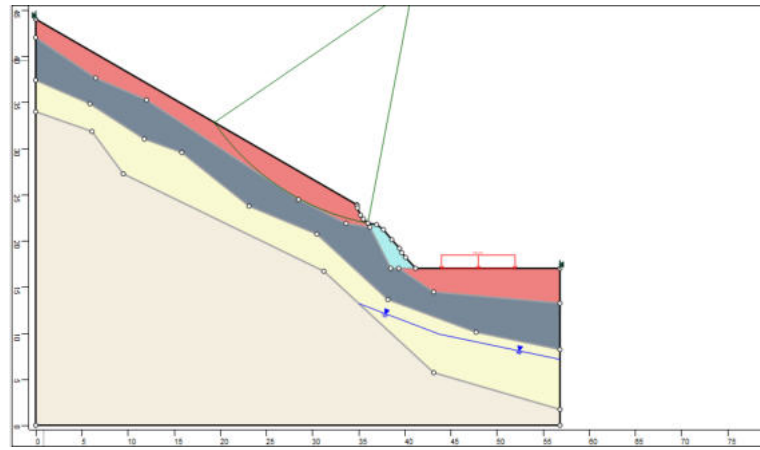
Método Bishop Simplificado:  
 FS Mín: 1.27248  
 Centro: 39.3568,42.2506  
 Raio: 25.3183  
 Ponto da Superfície Esq.: 15,35.3397  
 Ponto da Superfície Dir.: 41.2069,17

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.736193

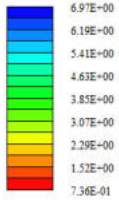
Centro: 132.715,86.6867

Raio: 136.497

Ponto da Superfície Esq.: 14.4286,18.5714

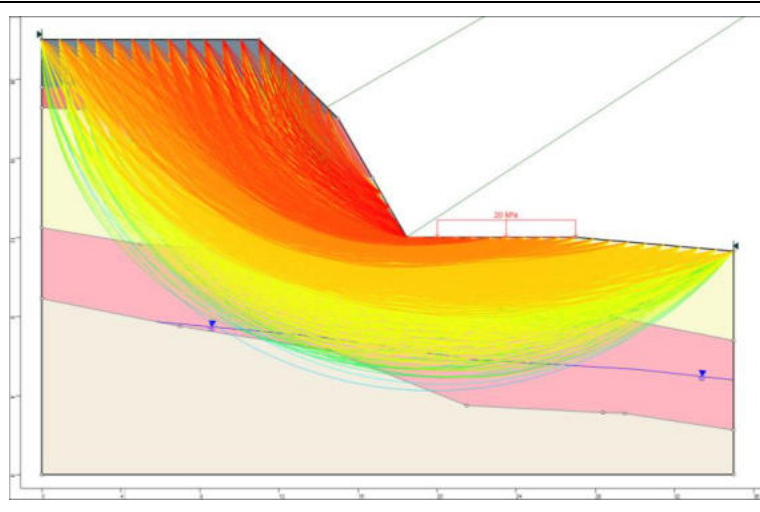
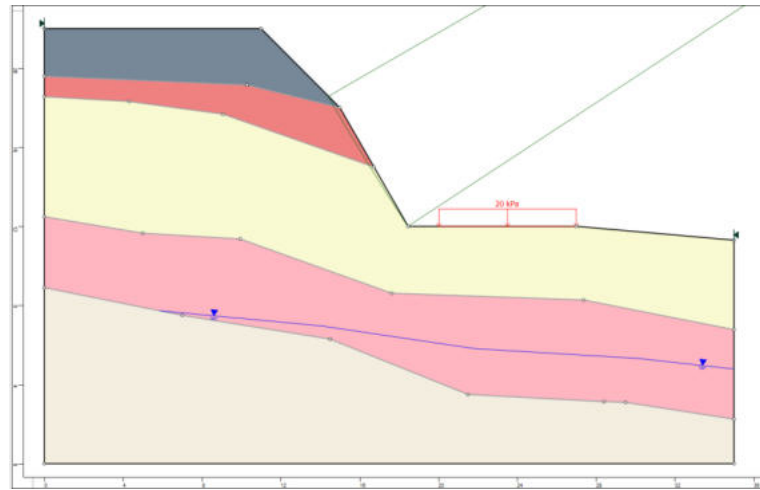
Ponto da Superfície Dir.: 18.4641,12

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 1.03425

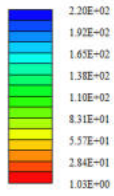
Centro: 34.6694,25.0028

Raio: 12.9479

Ponto da Superfície Esq.: 21.7215,25.0028

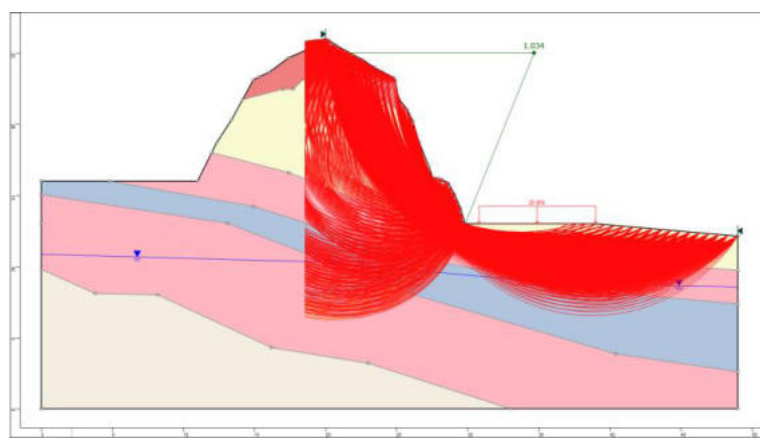
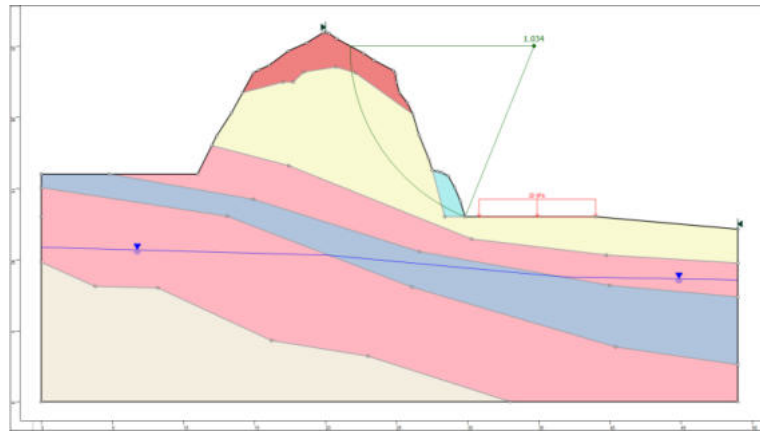
Ponto da Superfície Dir.: 29.8133,13

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



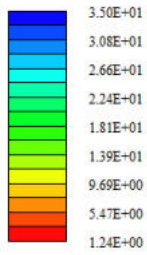
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

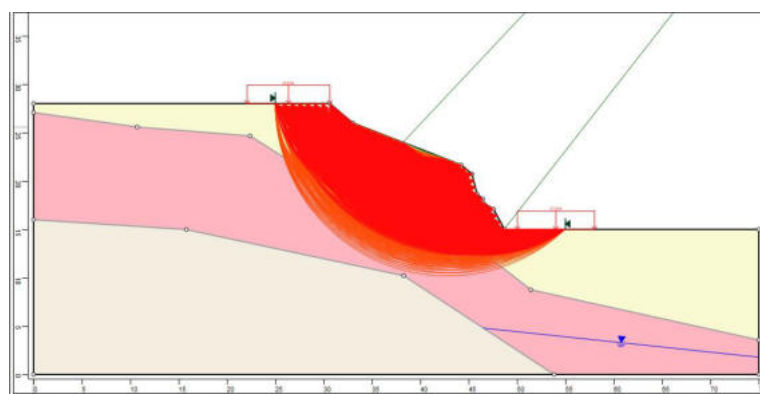
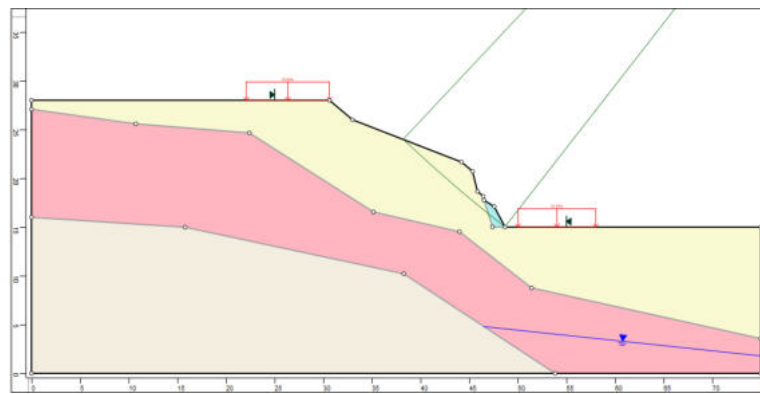
Método Bishop Simplificado:  
 FS Min: 1.24058  
 Centro: 141.042,133.217  
 Raio: 150.012  
 Ponto da Superfície Esq.: 38.232,23.9749  
 Ponto da Superfície Dir.: 48.6923,15

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraii Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 0.993

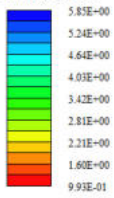
Centro: 148.78,101.035

Raio: 155.835

Ponto da Superfície Esq.: 15.8163,19.7632

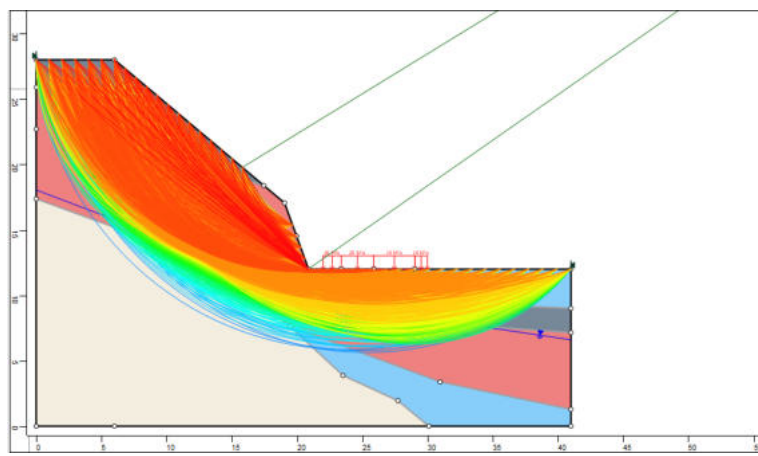
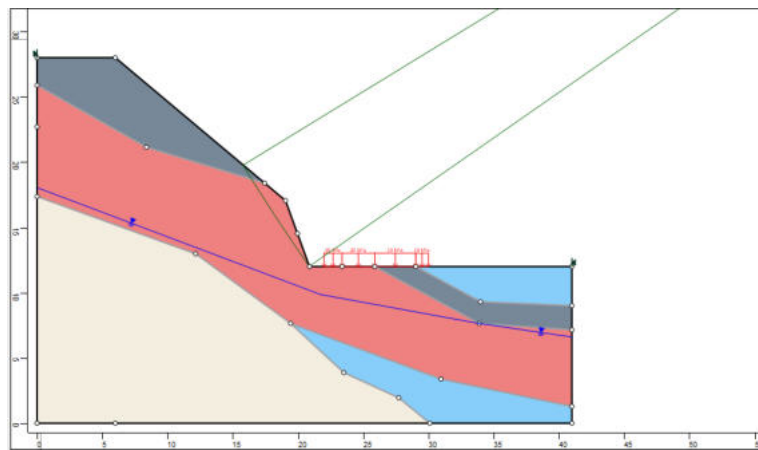
Ponto da Superfície Dir.: 20.8846,12

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



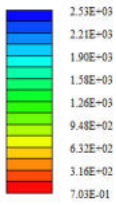
**HYRCAN 2.0**

©2024 Roozbeh Geratli Mikola

**Factor de Segurança**

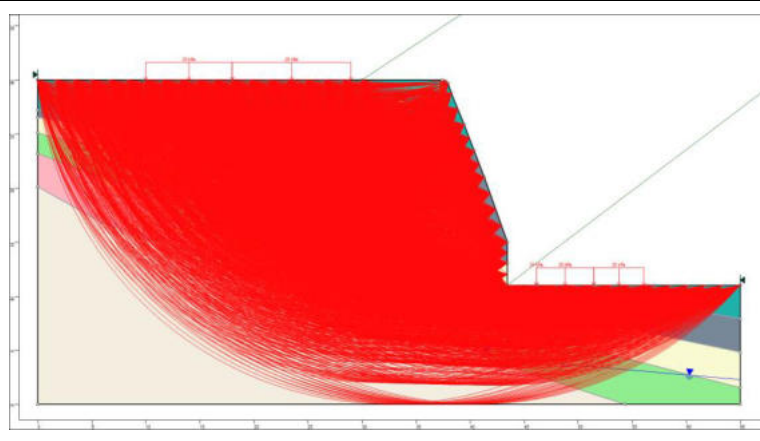
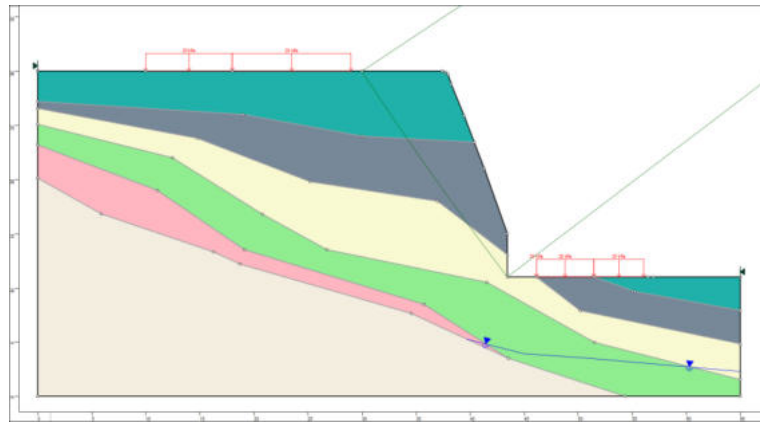
Método Bishop Simplificado:  
 FS Mín: 0.703397  
 Centro: 335.104,231.868  
 Raio: 365.84  
 Ponto da Superfície Esq.: 30,30  
 Ponto da Superfície Dir.: 43.4596,11

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



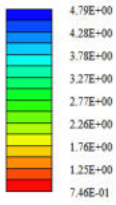
**HYRCAN 2.0**

©2024 Roozbeh Geraii Mikola

**Factor de Segurança**

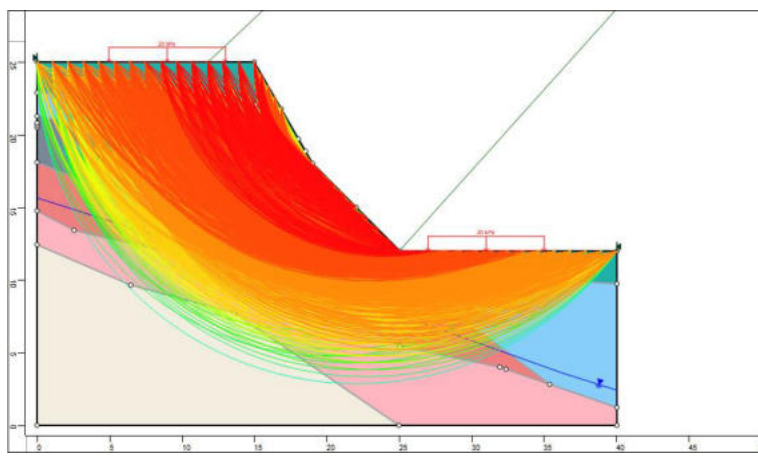
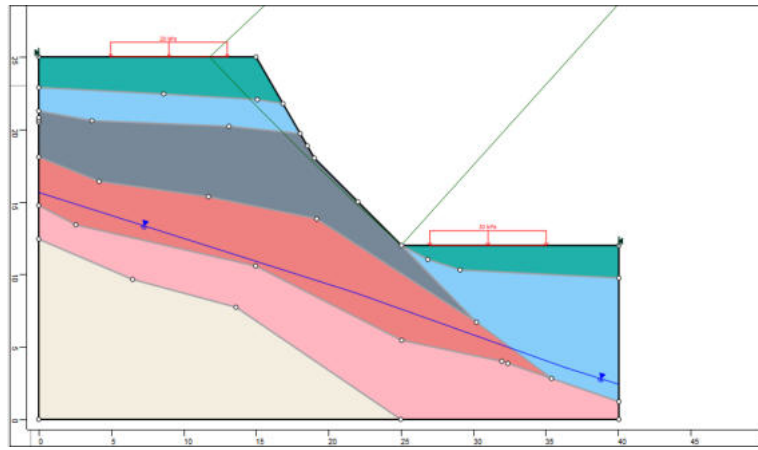
Método Bishop Simplificado:  
 FS Min: 0.745591  
 Centro: 173.075,176.29  
 Raio: 221.14  
 Ponto da Superfície Esq.: 11.7857,25  
 Ponto da Superfície Dir.: 25.049,12

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# JOI/065

## HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

### Factor de Segurança

Método Bishop Simplificado:

FS Mm: 0.736883

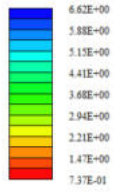
Centro: 119.537,99.4416

Raio: 130.464

Ponto da Superfície Esq.: 16.6103,19.2727

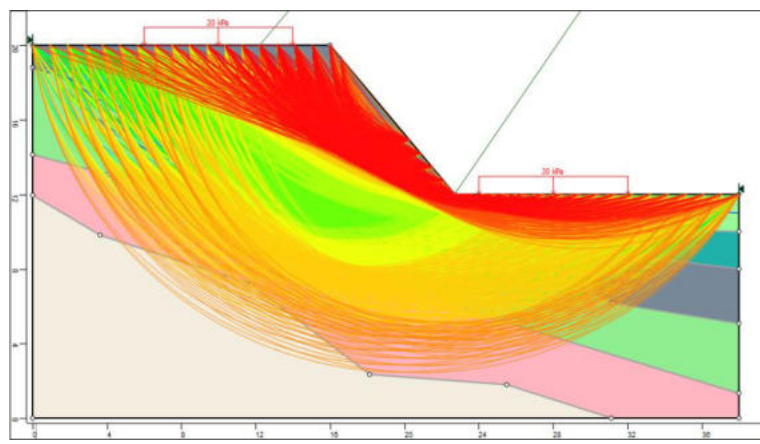
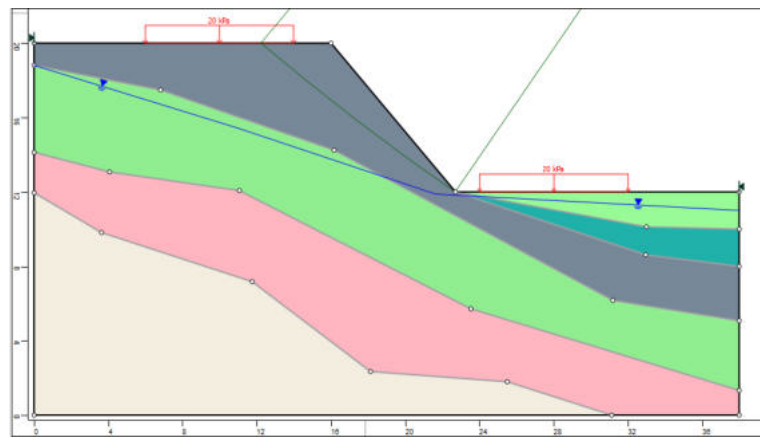
Ponto da Superfície Dir.: 22.7128,12

### Gráfico de FS



### Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



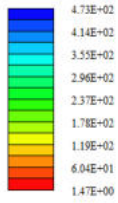
# HYRCAN 2.0

©2024 Roozbeh Geraii Mikola

## Factor de Segurança

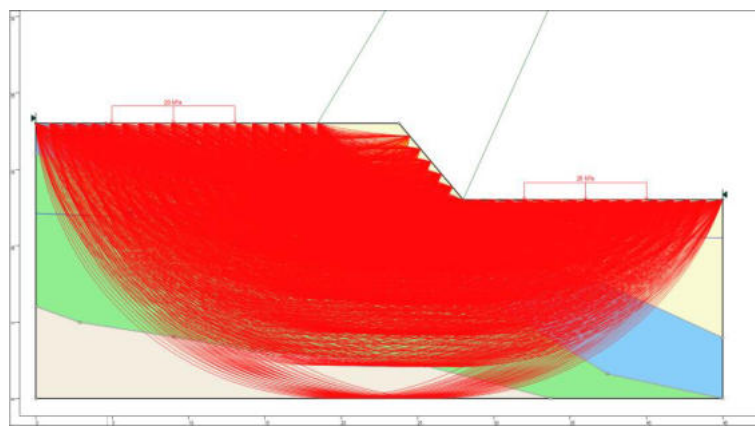
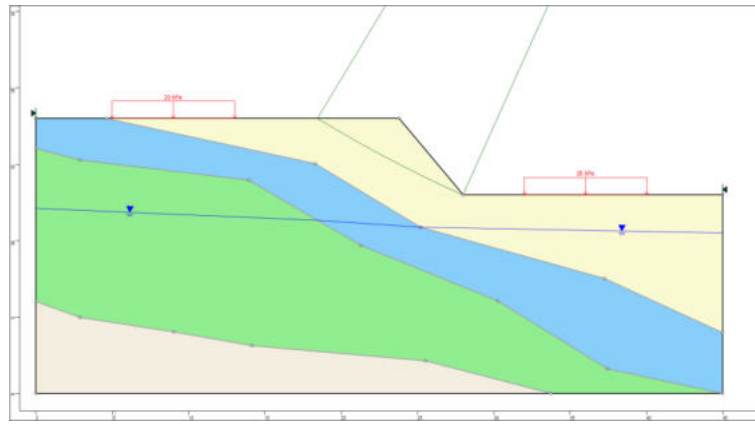
Método Bishop Simplificado:  
 FS Min: 1.46502  
 Centro: 26.0062,21.9749  
 Raio: 9.48105  
 Ponto da Superfície Esq.: 17.3986,18  
 Ponto da Superfície Dir.: 29.0625,13

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Rootzbeh Geralti Mikota

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 0.802418

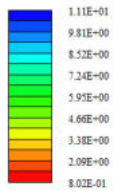
Centro: 49.567,46.1487

Raio: 42.4645

Ponto da Superfície Esq.: 8.77354,34.3537

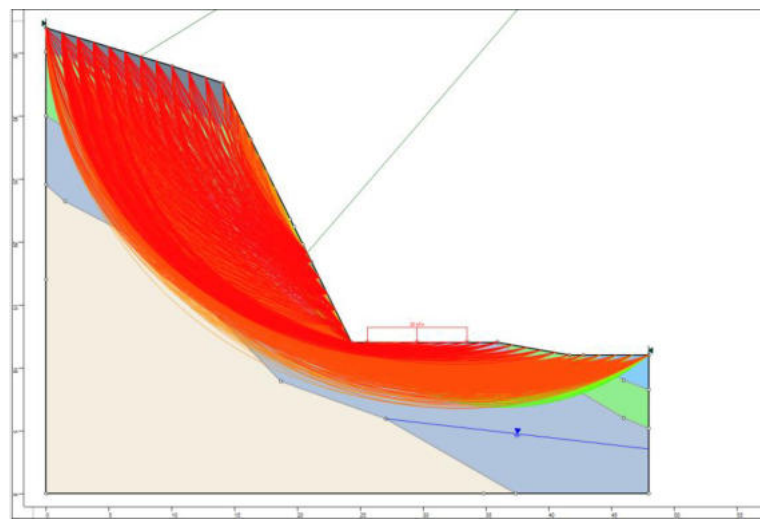
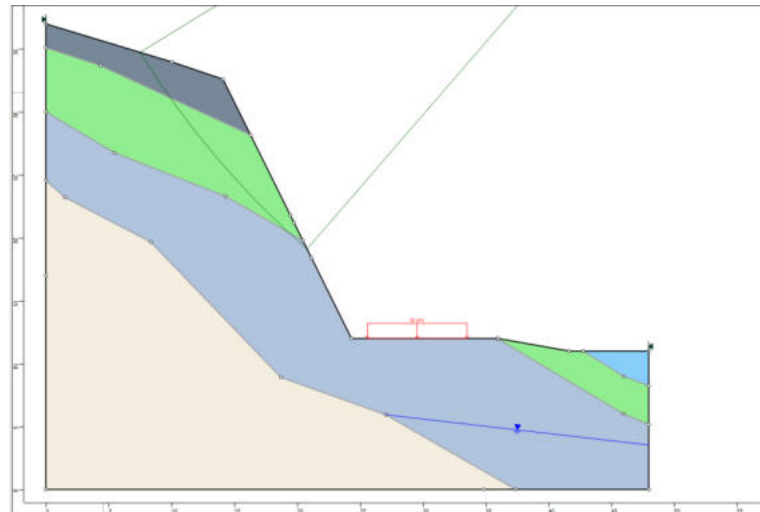
Ponto da Superfície Dir.: 24.3262,12

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraii Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 1.33982

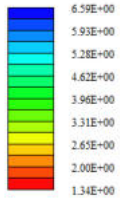
Centro: 92.9461,90.3971

Raio: 62.2253

Ponto da Superfície Esq.: 50.1694,45.207

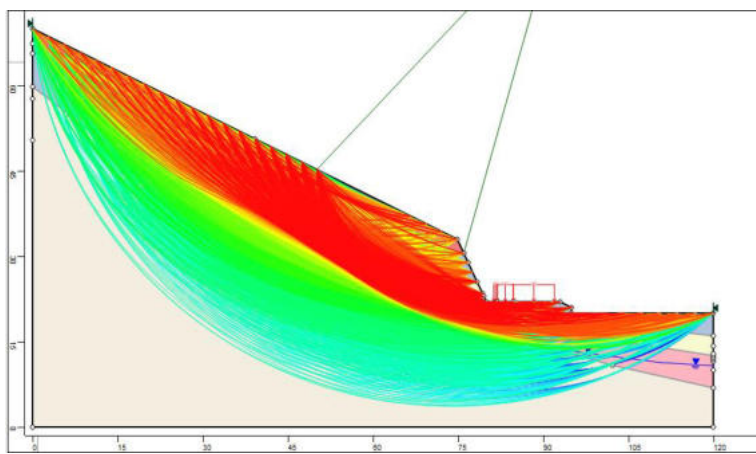
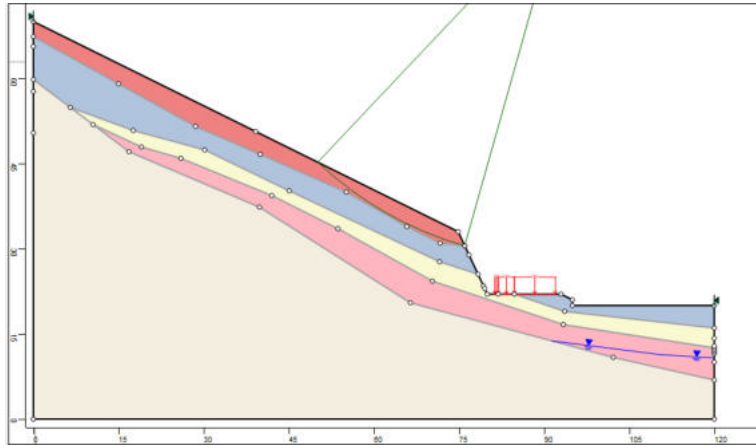
Ponto da Superfície Dir.: 76.0292,30.5155

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.796988

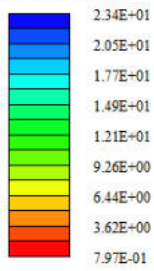
Centro: 183.96,135.522

Raio: 192.991

Ponto da Superfície Esq.: 24.9125,26.2089

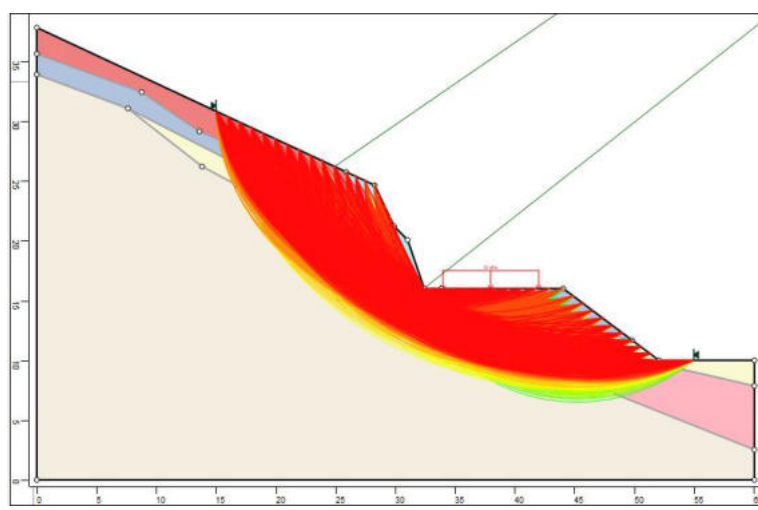
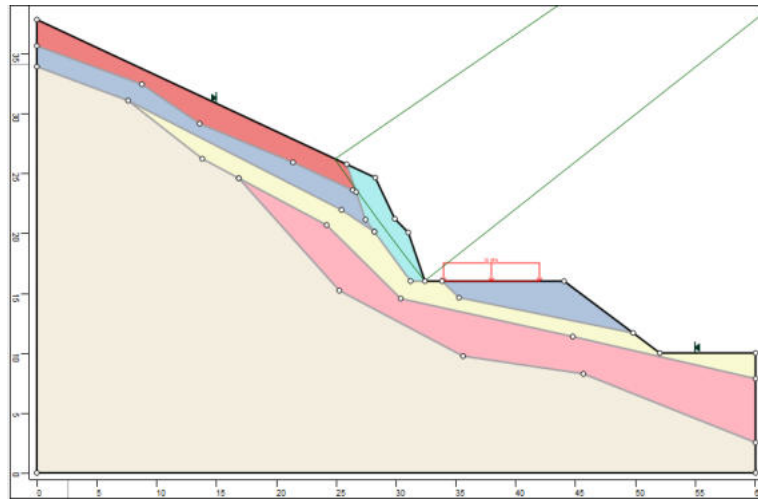
Ponto da Superfície Dir.: 32.4345,16

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Mín: 1.41218

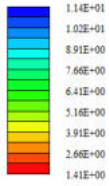
Centro: 62.4188,68.7185

Raio: 36.685

Ponto da Superfície Esq.: 33.6149,46

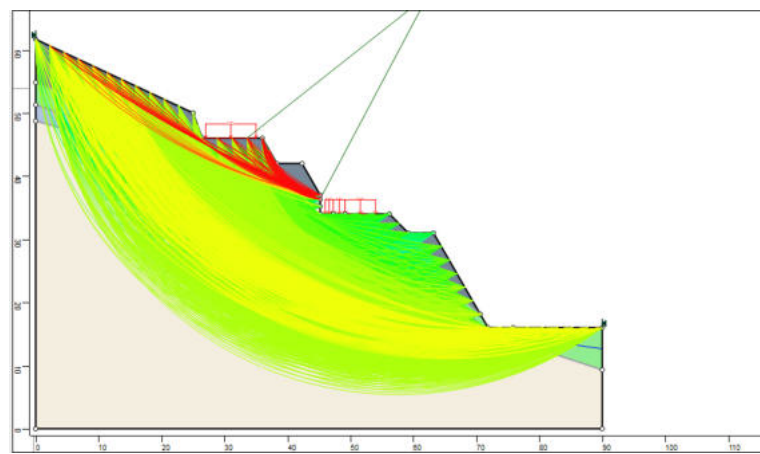
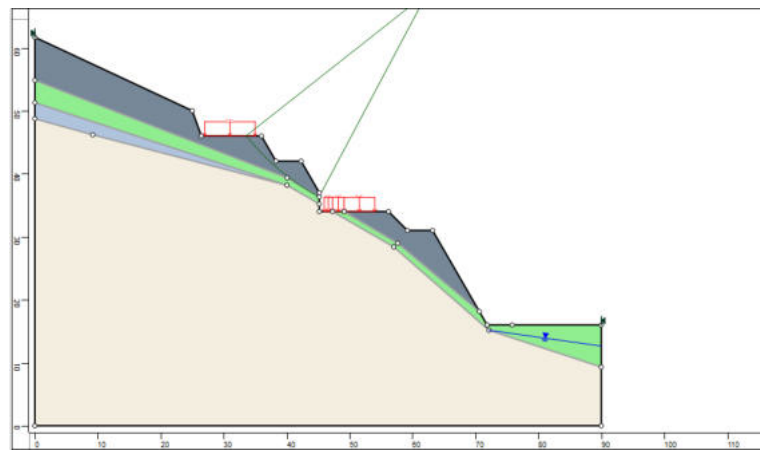
Ponto da Superfície Dir.: 45.1962,36.3275

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geranli Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Min: 0.905414

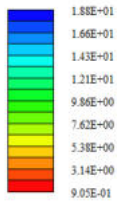
Centro: 31.5106,45.7768

Raio: 31.9685

Ponto da Superfície Esq.: 1.29269,35.343

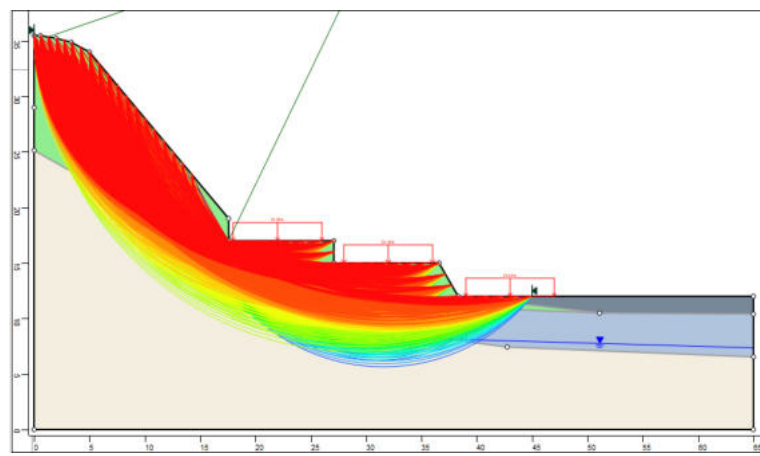
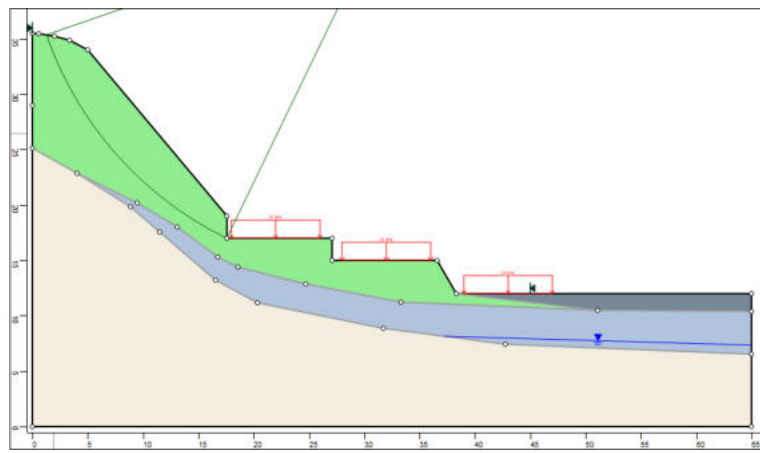
Ponto da Superfície Dir.: 17.5865,17

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraii Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 0.753492

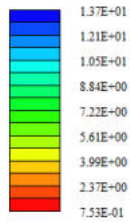
Centro: 185.844,126.51

Raio: 201.833

Ponto da Superfície Esq.: 13.1765,22

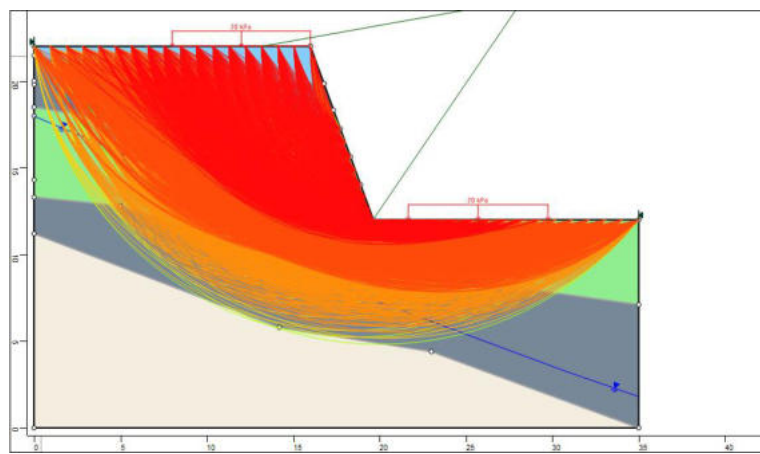
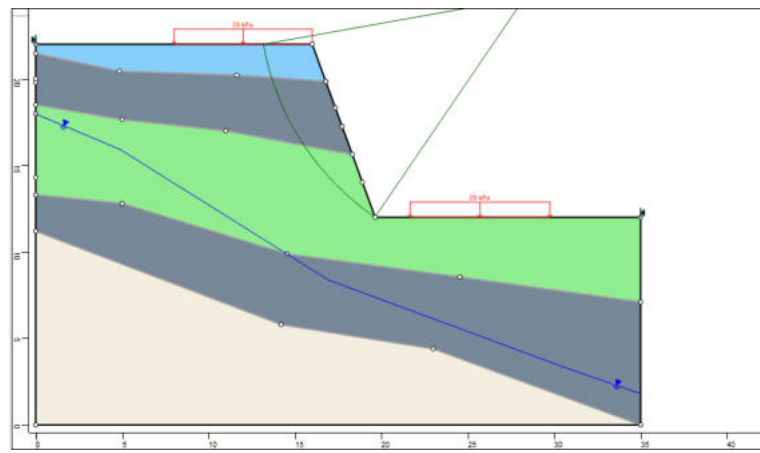
Ponto da Superfície Dir.: 19.6397,12

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Mín: 1.38132

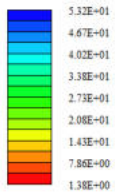
Centro: 18.8342,21.6346

Raio: 9.10543

Ponto da Superfície Esq.: 10,19.4289

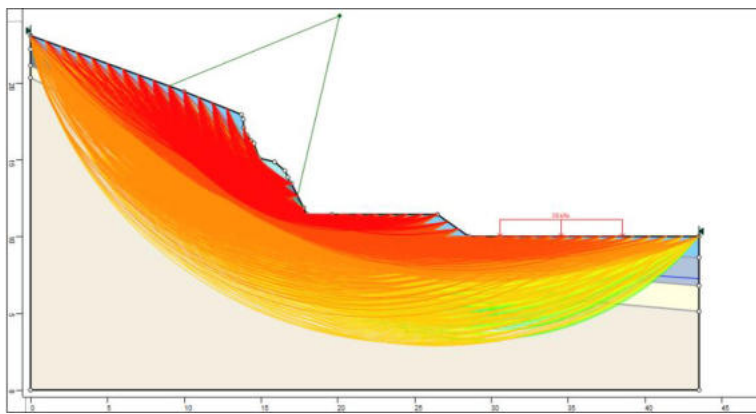
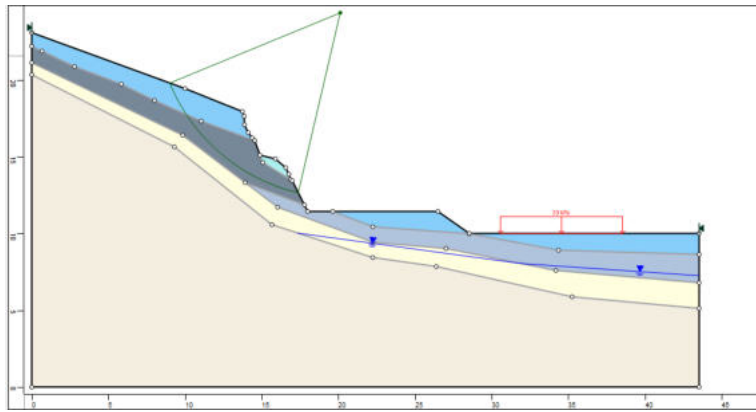
Ponto da Superfície Dir.: 17.3924,12.6441

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Mín: 1.43379

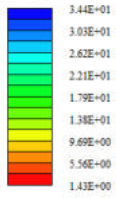
Centro: 29.831,27.4146

Raio: 13.5981

Ponto da Superfície Esq.: 17.986,20.7358

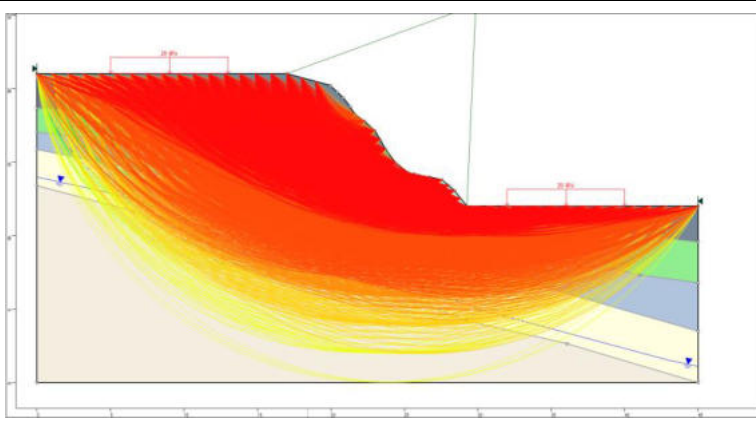
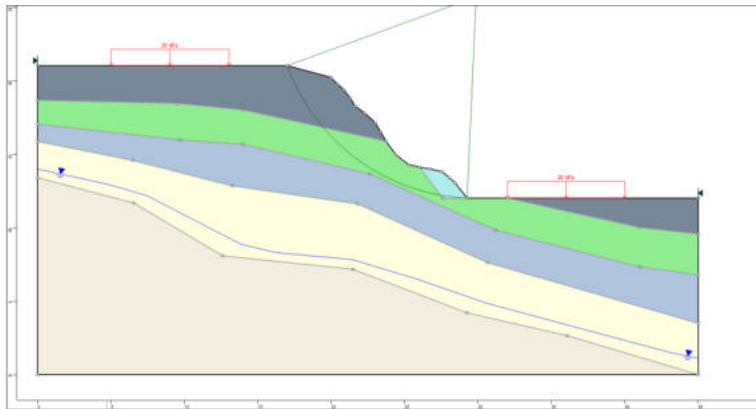
Ponto da Superfície Dir.: 24.3964,14.9496

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraii Mikola

## Factor de Segurança

Método Bishop Simplificado:

FS Min: 1.40922

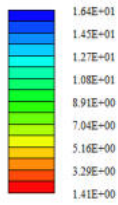
Centro: 37.6713,33.0906

Raio: 25.2952

Ponto da Superfície Esq.: 19.995,14.9965

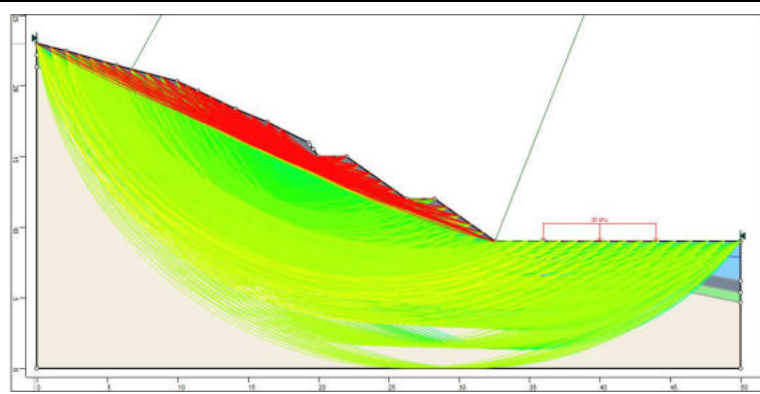
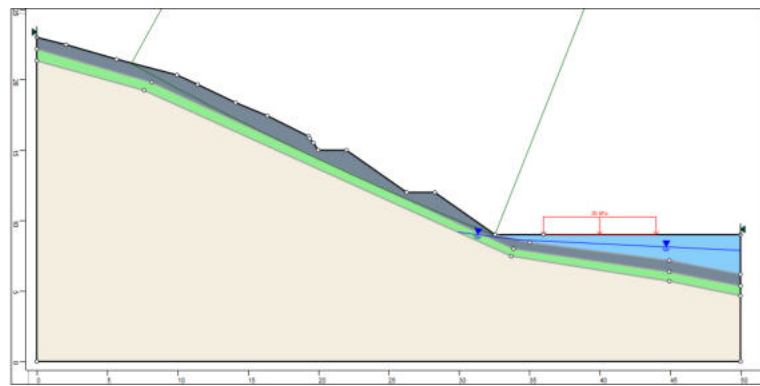
Ponto da Superfície Dir.: 29.9583,9

## Gráfico de FS



## Material Atribuído

Material 1 (MC)
Material 2 (MC)
Material 3 (MC)
Material 4 (MC)
Material 5 (MC)
Material 6 (MC)
Material 7 (MC)
Material 8 (MC)
Material 9 (MC)
Material 10 (MC)
Material 11 (MC)
Material 12 (MC)
Material 13 (MC)
Material 14 (MC)
Material 15 (MC)
Material 16 (MC)



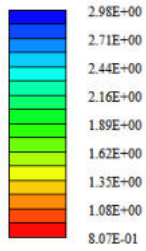
# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

## Factor de Segurança

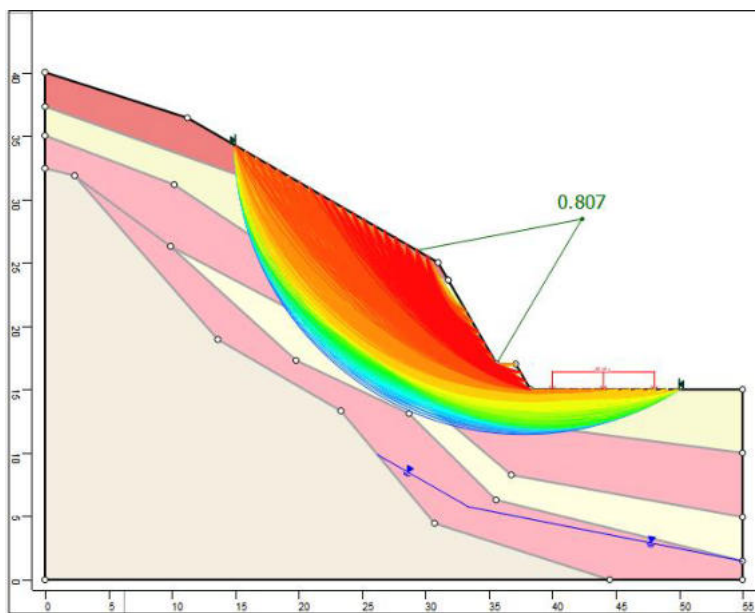
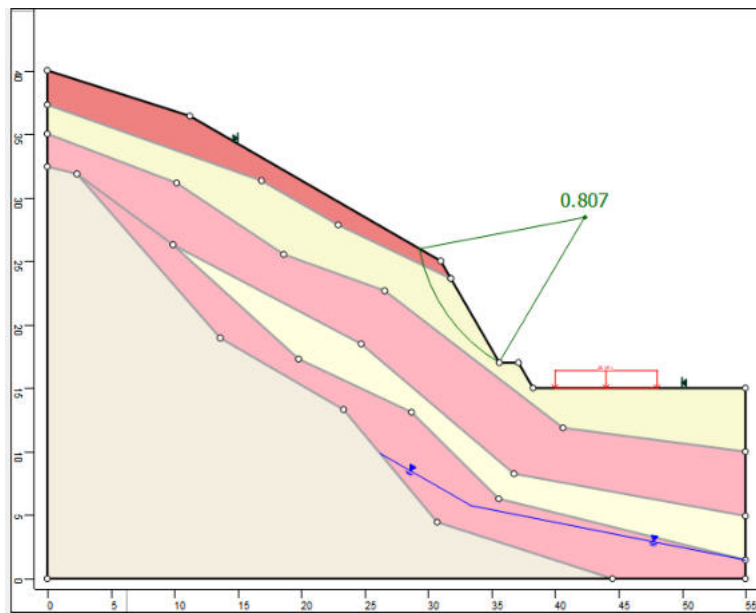
Método Bishop Simplificado:  
 FS Min: 0.806605  
 Centro: 42.366,28.44  
 Raio: 13.2815  
 Ponto da Superfície Esq.: 29.3158,25.9724  
 Ponto da Superfície Dir.: 35.6188,17

## Gráfico de FS



## Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Mín: 1.17509

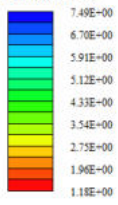
Centro: 77.9869,62.9893

Raio: 41.5369

Ponto da Superfície Esq.: 44.2992,38.69

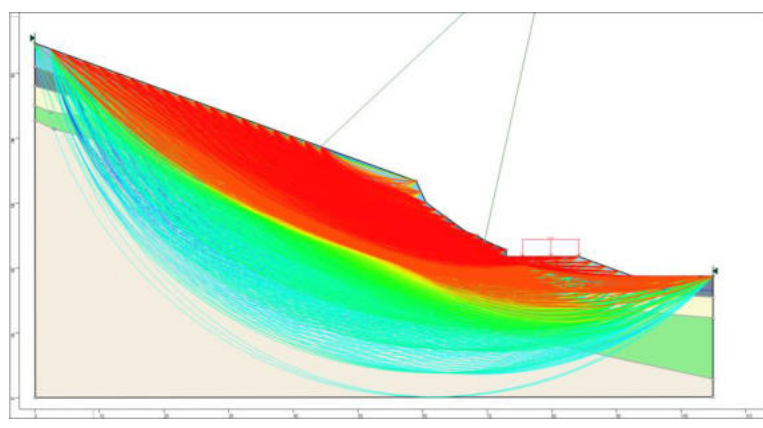
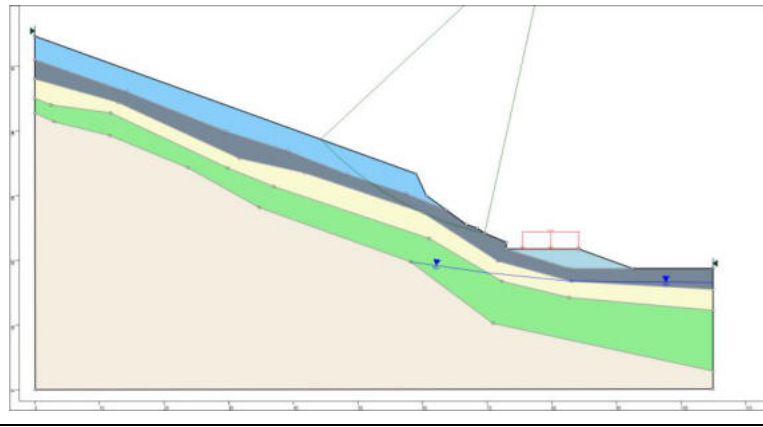
Ponto da Superfície Dir.: 73.21.7528

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:

FS Mín: 0.745098

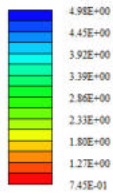
Centro: 114.467,53.1153

Raio: 61.3203

Ponto da Superfície Esq.: 58.1962,28.7477

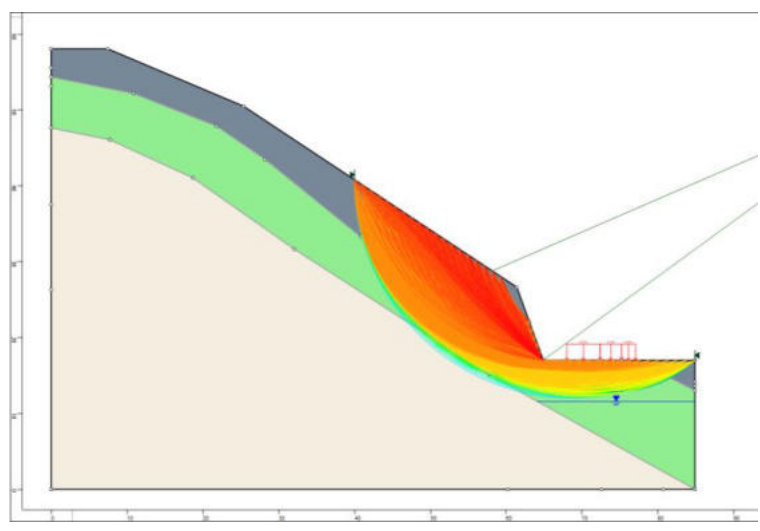
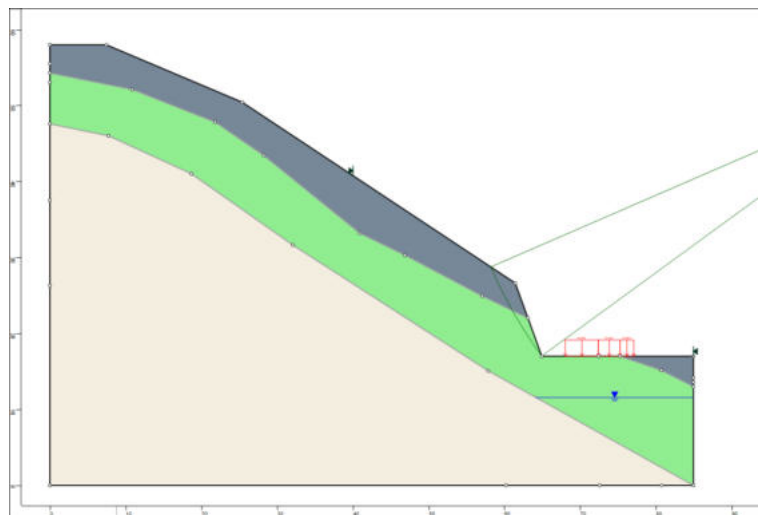
Ponto da Superfície Dir.: 64.9103,17

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



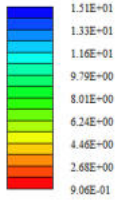
**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

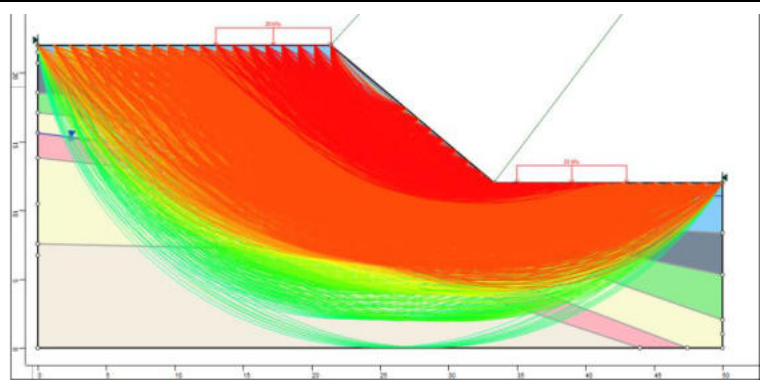
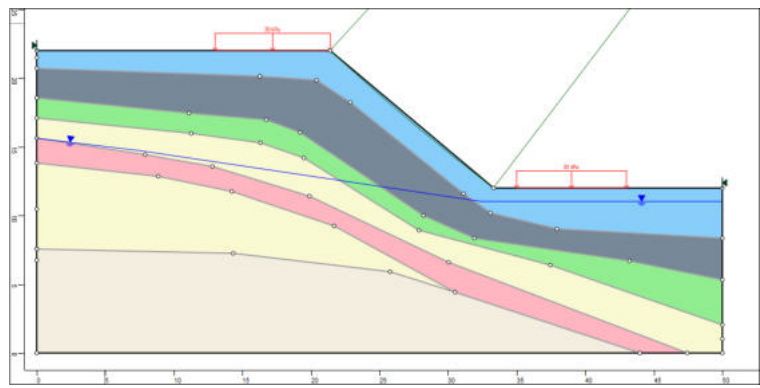
Metodo Bishop Simplificado:  
 FS Min: 0.90583  
 Centro: 127.746,149.348  
 Raio: 166.675  
 Ponto da Superficie Esq.: 20.2139,22  
 Ponto da Superficie Dir.: 33.3205,12

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



# HYRCAN 2.0

©2024 Roozbeh Geraili Mikola

### Factor de Segurança

Método Bishop Simplificado:

FS Mm: 1.27742

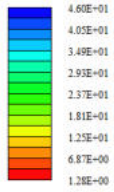
Centro: 30.7729,26.4062

Raio: 17.0914

Ponto da Superfície Esq.: 15.5542,18.6274

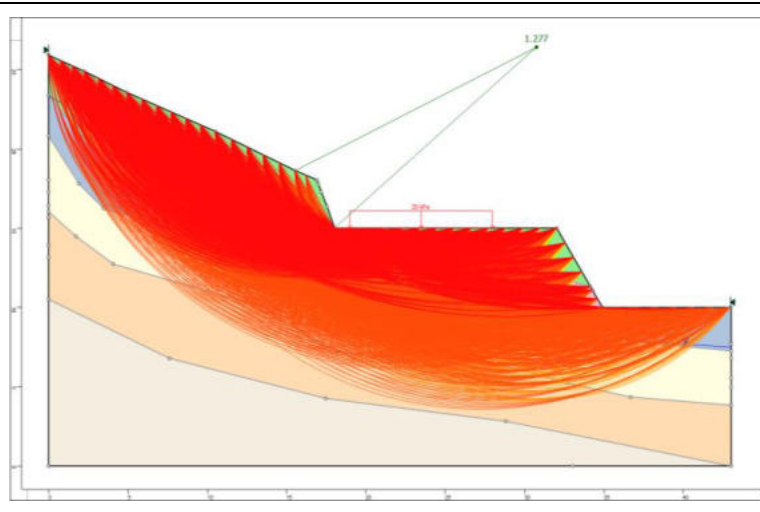
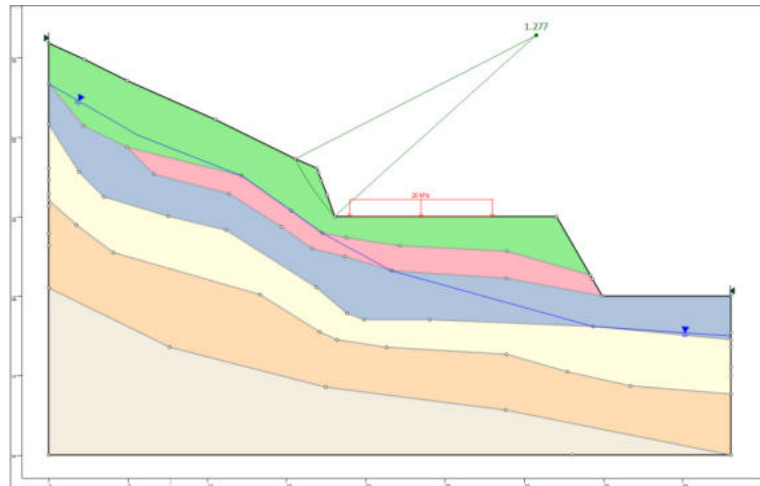
Ponto da Superfície Dir.: 18.0443,15

### Gráfico de FS



### Material Atribuído

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)



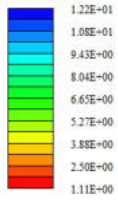
**HYRCAN 2.0**

©2024 Roozbeh Geraili Mikola

**Factor de Segurança**

Método Bishop Simplificado:  
 FS Mín: 1.10911  
 Centro: 52.4873,63.3197  
 Raio: 55.0367  
 Ponto da Superfície Esq.: 5,35.4989  
 Ponto da Superfície Dir.: 32.6044,12

**Gráfico de FS**



**Material Atribuído**

- Material 1 (MC)
- Material 2 (MC)
- Material 3 (MC)
- Material 4 (MC)
- Material 5 (MC)
- Material 6 (MC)
- Material 7 (MC)
- Material 8 (MC)
- Material 9 (MC)
- Material 10 (MC)
- Material 11 (MC)
- Material 12 (MC)
- Material 13 (MC)
- Material 14 (MC)
- Material 15 (MC)
- Material 16 (MC)

