BOILING

Water Table  Boiling
BULGE AND SUBSIDENCE
HEAVE AND SOIL WEIGHT
SLIDING

![Diagram of sliding](image-url)
TENSION CRACK

Tension Crack

H

.5 to .75 H
MULTIPLE BENCH EXCAVATION TYPE A SOIL

TYPE A SOIL
Multiple Bench Excavation

12' Maximum
5' Max.
4' Max.

3/4
MULTIPLE BENCH TYPE B SOIL

TYPE B SOIL
Multiple Bench Excavation
[Permitted in cohesive soil only]

20' Maximum

4' Max.

4' Max.
SIMPLE BENCH EXCAVATION TYPE A SOIL

TYPE A SOIL
Simple Bench Excavation

20' Maximum

4' Max.
Type B Soil
Single Bench Excavation
[Permitted in cohesive soil only]

20' maximum

4' max.
SIMPLE SLOPE SHORT TERM TYPE A SOIL

TYPE A SOIL
Simple Slope -- Short Term

12' Maximum

1/2
SIMPLE SLOPE TYPE A SOIL

TYPE A SOIL
Simple Slope Excavation

20' Maximum

1
3/4
SIMPLE SLOPE TYPE C SOIL

20' Maximum

TYPE C SOIL
Simple Slope Excavation

1 1/2
TYPE A OVER TYPE B RATIO
Type A Soil over Type C Soil
TYPE A SOIL 8' MAXIMUM UNSUPPORTED

TYPE A SOIL
Unsupported vertically sided lower portion
Maximum 8 Feet in depth

8' Maximum

3 1/2 Max.

3/4
TYPE A SOIL
Unsupported vertically sided lower portion
Maximum 12 Feet in depth

12' Maximum

3 1/2 Max.
TYPE A SOIL
Supported or shielded
Vertically sided lower portion

20' Maximum
Support or shield System
3/4
18" Min.
TYPE B OVER TYPE A SOIL RATIO
TYPE B OVER TYPE C SOIL SLOPE RATIO
TYPE B SOIL VERTICALLY SHEILDDED

TYPE B SOIL
Supported of shielded
Vertically sided lower portion

20' Maximum

Support or shield System

L 18'' Min.
TYPE C OVER TYPE A SOIL SLOPE RATIO
TYPE C OVER TYPE B SOIL SLOPE RATIO

Type C Soil over Type B Soil
TYPE C SOIL SUPPORT RATIO

TYPE C SOIL
Supported of shielded
Vertically sided lower portion

20' Maximum
18" Min.

Support or shield System

1
1 1/2
TEMPORARY SOIL PILE

Temporary Spoil

2 Feet Minimum
TRENCH BOX

- Strut
- Sidewall
- Knife Edge
TRENCH BOX STEP DOWN
SHEETING WALE

- Upright (when spaced)
- Sheeting
- Wale
- Strut (crossbrace)