

VAOT EARTH RETAINING SYSTEM SELECTION CHART

GENERAL CLASSIFICATION

APPROVED SYSTEMS

COMMENTS

A. FILL WALLS ^(1,2)

1. Rigid Gravity and Semi-Gravity Walls

→ Cast-in-place (CIP)
Concrete Gravity Wall

- 10 ft. max. height
- Settlement sensitive
- May require deep foundation

→ CIP Concrete Cantilever/
Counterfort Wall

- Settlement sensitive
- 30 ft. max. height (cantilever)
- 60 ft. max. height (counterfort)
- May require deep foundation

2. Prefabricated Modular Gravity Walls

→ Modular Crib/Bin Wall
-Doublewal[®]
-Stawal[®]
-Timber (VAOT)
-Contech[®]
-T-Wall[®]
-Redi-Rock[™] *
-Recon[™]

-Gabion**

- General
- 35 ft. max. height (except as noted)
 - Some systems not settlement tolerant

- *8 ft. max. height (without geogrid reinforcement)

- **25 ft. max. height
- **Labor intensive
- **Abrasion susceptible
- **Need good stone source
- **Wire baskets subject to corrosion
- **Settlement tolerant

-Contech Precast Anchored
Wingwall System***

- ***Approved only for use with
Contech Con/Span[®] Bridge Systems

3. Mechanically Stabilized Earth (MSE) Walls

→ Segmental, Precast Facing
MSE wall
-Reinforced Earth[®]
-Retained Earth[™]
-Tricon[™] (under eval.)

- 65 ft. max. height
- Backfill must meet electrochemical requirements
- May Interfere w/underground utilities
- Scour susceptible
- Minimum base width = 0.7H
- Settlement tolerant

→ Geotextile/Geogrid/Welded
Wire Facing MSE Wall
-Tailed Gabions
-Redi-Rock[™]
with geogrids

- See Gabions
- Also suited for temporary conditions

