

## Retaining Wall General Notes

### Construction Notes

1. Soil loadings considered in this design and calculations are based on the following parameters:

	Friction Angle	Cohesion	Unit Weight	Soil Type
Infill Soil	30°	0 PSF	120 PCF	Well compacted silty, sandy clay
Retained Soil	30°	0 PSF	120 PCF	Well compacted silty, sandy clay
Foundation Soil	30°	0 PSF	120 PCF	Well compacted silty, sandy clay

2. Actual soil parameters must meet or exceed these listed conditions to be used in wall construction. In general, Granular soils (Friction angle greater than or equal to 32 degrees) are recommended as infill soil. Fine grained cohesive soils (Friction angle less than 32 degrees) with low plasticity (PI less than 20) may be used in wall construction, but additional backfilling and compaction efforts are required. Allan Block Corporation has not verified these design conditions, and if required the soil parameters shall be confirmed by the Site Geotechnical Engineer or others prior to wall construction.
3. Seismic loading considered in this design is based on the following parameters:  
Seismic Coefficient  $A_0 = X$   
Allowable Lateral Deflection External =  $X$  inches  
Allowable Lateral Deflection Internal =  $X$  inches
4. Global stability is not considered in this design.
5. Hydrostatic loading is not considered in this analysis. Sufficient drainage must be provided such that hydrostatic loading (pore pressure) does not develop in the reinforced zone.
6. Analysis assumes fill placement in 8 inch (200 mm) lifts compacted to 95% standard proctor. Compaction test frequency shall be determined by the engineer or as otherwise specified.
7. Retaining wall units and installation shall conform to the Allan Block Modular Retaining Wall Systems Specification Guidelines, Geogrid Reinforcement Systems Specification Guidelines, and Water Management Specification Guidelines as published in the AB Spec Book and the AB Engineering Manual.
8. Retaining walls must be installed and constructed according to the contract drawings. The retaining wall plan view is for wall identification only.
9. Geogrid spacing is determined by structural cross-section design requirements. To insure proper geogrid placement, contractor must review both elevation view and cross sections prior to wall construction.
10. Suggested Quality Assurance Requirements:  
A qualified engineer or technician shall supervise the wall construction to verify field and site soil conditions. In the event that the Site Geotechnical Engineer does not perform this work, a qualified Geotechnical Engineer/Technician shall be consulted to assure the Allan Block Wall is constructed with proper soil parameters.

### Surface Drainage Notes

11. Rainfall and other water sources such as irrigation activities can be defined as surface water. The retaining wall design shall take into consideration the management of this water.
12. Site grading shall be designed to route surface water around and away from the wall.

13. The internal drainage system of the retaining wall is designed to remove incidental water that infiltrates into the soil behind the wall. Adequate storm water drainage systems are required to completely drain the area around the retaining wall structure.
14. Drain piping, toe drain, should be located at the back of the rock drain field behind the wall as close to the bottom of the wall as allowed while still maintaining a positive gradient for drainage to daylight, or to a storm water management system.
15. A heel drain may be required at back of the cut to route water away from the reinforced soil mass during the construction process.
16. Ground water can be present within the soil due to surface infiltration or water table fluctuation. If ground water is encountered during construction, an adequate drainage system must be installed or the wall design must consider the presence of water within the soil mass.
17. All water collection devices such as roof downspouts, storm sewers, and curb gutters must be designed to accommodate maximum flow rates and outlet outside the retaining wall area.
18. Retaining walls in conditions that allow standing water to overlap the wall face are considered water applications. These walls require specific design and construction steps to ensure performance.