

## Project Design Inputs

### Design Standard National Concrete Masonry Association 3rd Edition

#### Minimum Factors of Safety

##### Conventional

External		Value	Internal		Value	Facing	Value
FSSl	Base Sliding	1.50	FSSl	Internal Sliding	1.50		
FSbc	Bearing Capacity	2.00	FSsc	Shear Capacity	1.50		
FSot	Overturning	1.50					

##### No Fines

External		Value	Internal		Value	Facing	Value
FSSl	Base Sliding	1.50					
FSbc	Bearing Capacity	2.00					
FSot	Overturning	1.50					

##### Reinforced

External		Value	Internal		Value	Facing		Value
FSSl	Base Sliding	1.50	FSSl	Internal Sliding	1.50	FScs	Connection Strength	1.50
FSbc	Bearing Capacity	2.00	FSpO	Pullout	1.50	FSsc	Facing Shear	1.50
FSct	Crest Toppling	1.50	FSto	Tensile Overstress	1.50			
FSot	Overturning	2.00						

#### Design Factors

Term	Description	Minimum (as appl.)	Maximum (as appl.)
RC	Reinforced coverage ratio	1.00	0.00

#### Selected Facing Unit

Licenser/Product Line: VERSA-LOK Retaining Wall Systems

Name: Square Foot

Facing Height	Hu	0.67 ft
Facing Width	Lu	1.50 ft
Facing Depth	Wu	1.00 ft
Facing Weight	Xu	115 lb/ft <sup>3</sup>
Center of Gravity	Gu	0.50 ft
Setback	u	0.08 ft
Batter		7.10 °
Cap Height	Hcu	0.30 ft
Initial Shear Capacity	au	1145.36 lb/ft
Apparent Shear Angle	u	35.00 °
Maximum Shear Capacity	Vu(max)	5351.70 lb/ft

#### Selected Reinforcement Types

##### Reinforcements

3XT - Miragrid 3XT

Supplier: TenCate Mirafi - Miragrid XT, Fill Type: 3/4"- gravels or aggregate

Tult	3,500.00 lb/ft	RFcr	1.45	RFd	1.15	LTDS	1,908.14 lb/ft
RFid	1.10	Cds	0.90	Ci	0.90		

##### Connection/Shear Properties

cs1	991.32 lb/ft	IP-1	360.12 lb/ft	cs2	1,159.37 lb/ft	IP-2	1,906.60 lb/ft
cs max	1,880.60 lb/ft	au	1,100.35 lb/ft	u	32.00 lb/ft	Vu(max)	4,541.44 lb/ft

#### Selected Soil Types

Soil Zone	Soil Type	Friction Angle	In Situ	
			Density [lb/ft <sup>3</sup> ]	Cohesion Cf [lb/ft <sup>2</sup> ]
Infill (i)	GP	38°	135.00	n/a
Retained (r)	CL	25°	120.00	n/a
Foundation (f)	CL	25°	120.00	50.00