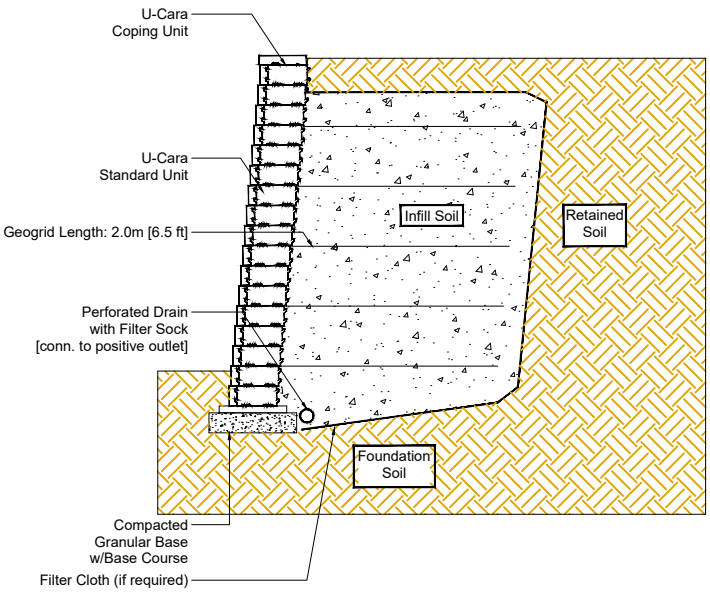
U-CARA™

REF: U-Cara_Grid Reinforced_Horizontal Load_8.6ft_2.62m

RETAINING WALL GEOGRID SECTION

2620mm (8.59ft) Site: Horizontal - Clays Infill: Granular



Design Specific Geometric Information

Retaining Wall System	U-Cara w/ Geogrid
Maximum Height mm (in)	2620 (103)
Maximum Slope Above Wall	Horizontal
Max. Surcharge Above Wall kPa (lb/sq.ft)	None
Batter of Wall	5.5 °

Geogrid Type and Manufacturer	See Notes
Minimum Geogrid LTDS kN/m (lb/ft)	See Notes
Maximum Slope Below Wall	None
Depth of Embedment mm (in)	262 (10)
Compacted Base Dimension mm (in)	656 x 150 (26 x 6)

Design Specific Soil Information

	Soil Region				
	Infill	Retained	Foundation	Base	Drainage
Description (by USCS)	GW Well graded, free draining Granular	CL Inorganic Clays Low Plasticity	CL Inorganic Clays Low Plasticity	GW Well graded, free draining Granular	see infill
Effective Internal Friction Angle	35 °	28 °	28 °	39 °	NR
Moist Unit Weight kN/cu.m (lb/cu.ft)	22 (140)	20 (127)	20 (127)	22 (140)	NR
Effective Cohesion kPa (lb/sq.ft)	NR	NR	NR	NR	NR
Soil Notes	Placed in 150mm (6") lifts and compacted to 95% SPD.	Undisturbed dense soil or well compacted Eng. fill.	Allowable bearing cap.must exceed 100kPa (2100 psf)	Crushed Gravel (free draining) compacted to 98% SPD.	Gravel infill must be well graded, angular, free drain w/max. 8% fines

NR - Not Required

Notes:

1. This Preliminary Design was analyzed in accordance with the National Concrete Masonry Association Design Manual for Segmental Retaining Walls, Second Edition. All minimum required Factors of Safety have been met or exceeded given the Design Parameters noted on this Drawing. This is a Typical, Non-Site Specific Design and is to be used for Estimation and Feasibility purposes only.

2. No analysis of Global Stability, total or differential settlement, or seismic effects has been performed.

3. This Preliminary Design is only provided to illustrate the General Arrangement of the SRW Structure for Preliminary costing and feasibility purposes. This Drawing is not for Construction. A qualified Engineer, licensed in the applicable Province/State, must be retained to provide a Final Design prior to Construction.

4. Structures such as handrails, guardrails, fences, terraces, and site conditions such as High Water level, Drainage, and Soil Conditions, additional live and dead loads, etc, have significant effects on the Wall Design and have not been taken into account in this Typical Section. When accounted for in the Final Design, other conditions and elements may result in additional Design Measures (geogrid, drainage, etc) and Cost.

5. For Geogrid Reinforced Structures, a minimum Long Term Design Strength of 1800 lb/lin.ft was assumed.

Contact your manufacturer for a list of approved Geogrid Reinforcements.