

Arboricultural Method Statement
for the proposed No-Dig section of Roadway at
Phase 2 Land to the rear of the Copse,
Worthing Road,
Southwater

Planning reference DC-26-0355 -



A trading name of RG Consultancy Ltd

Prepared by
Peter Wilkins BA(Hons) MArborA MEnvSc CEnv
Our Ref 0726-100907
July 2026

Introduction

This Arboricultural Method Statement has been prepared to provide supporting arboricultural information for the for the installation of the 'No-Dig' roadway which is proposed as part of the Phase 2 of the proposed development at Land to the rear of the Copse, Worthing Road, Southwater (Planning reference DC-26-0355).

The access road from Worthing Road, through by the Phase 1 Care Home development and into Phase 2 is going to be unadopted.

We have been involved with the project engineers Price & Myers and the cellular confinement materials suppliers Green-Fix (who have also assisted Price & Myers develop the site-specific specification for the roadway) in the progressing the proposed design to ensure that it can be installed to minimise its impact on the root protection area and rooting environment of the retained trees. Please see attached drawing, Drawing No. 31276-SK6071 and Geoweb Specification.

Phase 2 of this site is located to the western side of Phase 1, during the Phase 1 works the land that forms Phase 2 will be fenced-off with no access into this land during the Phase 1 works.

The no-dig section of the road is a continuation of a roadway that terminates near the boundary with Phase 2. The last section of Phase 1 roadway will be terminated with room to ensure that the tie-in detail between the traditional road construction and the no-dig section can be delivered. This normally involves overlapping the cellular confinement honeycomb layer with the sub-base of the traditional roadway. This ensures the cellular confinement systems is securely tied-in with the phase 1 roadway and the Geoweb can be pulled and pinned in place without creating a weak spot.

Prior to Works Commencing

Prior to works the detailed specification drawing and contractors proposed working methodology will be checked and approved by the Arboricultural Clerk of Works and Site Manager to check compliance with the approved drawings and the detailed Arboricultural Method Statement.

Prior to works commencing samples of all materials (including membranes and angular stone material) will be checked by the Arboricultural Clerk of Works and Site Manager to check compliance with the approved drawings and manufacturer's specification.

Prior to Phase 2 works commencing the groundwork contractor and site manager will meet on site to be briefed on the tree protection measures and working methodology by the Arboricultural Clerk of Works.

The Horsham tree officer will be given 14 days' notice of the start date on site.

No Dig Works

There will be no machinery or vehicular access into the open ground within Phase 2 until the tree protection fencing within 30m of any working area and the no dig section of roadway has been installed.

The tree protection fencing will be erected to the northern side of the proposed no-dig roadway.

All the no-dig roadway installation works will be undertaken under direct supervision by the Arboricultural Clerk of Works

Within the footprint of the proposed access road the top 100mm of vegetation and topsoil will be removed using hand-tools and light machinery (less than 3 tonne) running on suitable ground protection such as Tuff-Trak.

Within the no-dig working zone and within the fenced-off tree protection area no vehicles or machinery will run across open ground.

The roadway will be installed working from Phase 1, the materials and membrane will be rolled-out, and the roadway construction will proceed as per the proposed drawing. The Geoweb sections will be pinned in place and connected as per manufacturers specifications. The cells will be backfilled with clean angular stone.

All machinery and vehicles involved in the installation of the roadway will only run on the installed section of the roadway working into the site. The stone will be carefully tipped and then the Geoweb will be filled with stones by raking and shovelling the stone to fill the Geoweb honeycomb cells. The Geoweb gets its load bearing capacity by the friction created between the backfilled cells and the integrity of the whole extent of the Geoweb panels which are securely attached to each other, it is therefore essential that the entire width of the panel is filled before any traffic runs across the no-dig roadway.

As the sections of Geoweb roadway are backfilled a temporary permeable woven membrane will be laid on top of the backfilled honeycomb cells, and this will be covered with angular stone. This temporary membrane will remain in place during all ground works in Phase 2.

This membrane is intended to prevent the angular stone cells becoming filled with fines including earth from vehicle movements. At an appropriate stage in the construction programme the surplus stone and membrane will be removed and replaced with clean membrane and clean stone.

When the section of no-dig roadway has been completed tree protection fencing will be retained along the northern (tree) side of the roadway. This fencing will extend along the inside of the wooded area to the north as per the tree Protection Plan and remain in place for the duration of the construction programme.

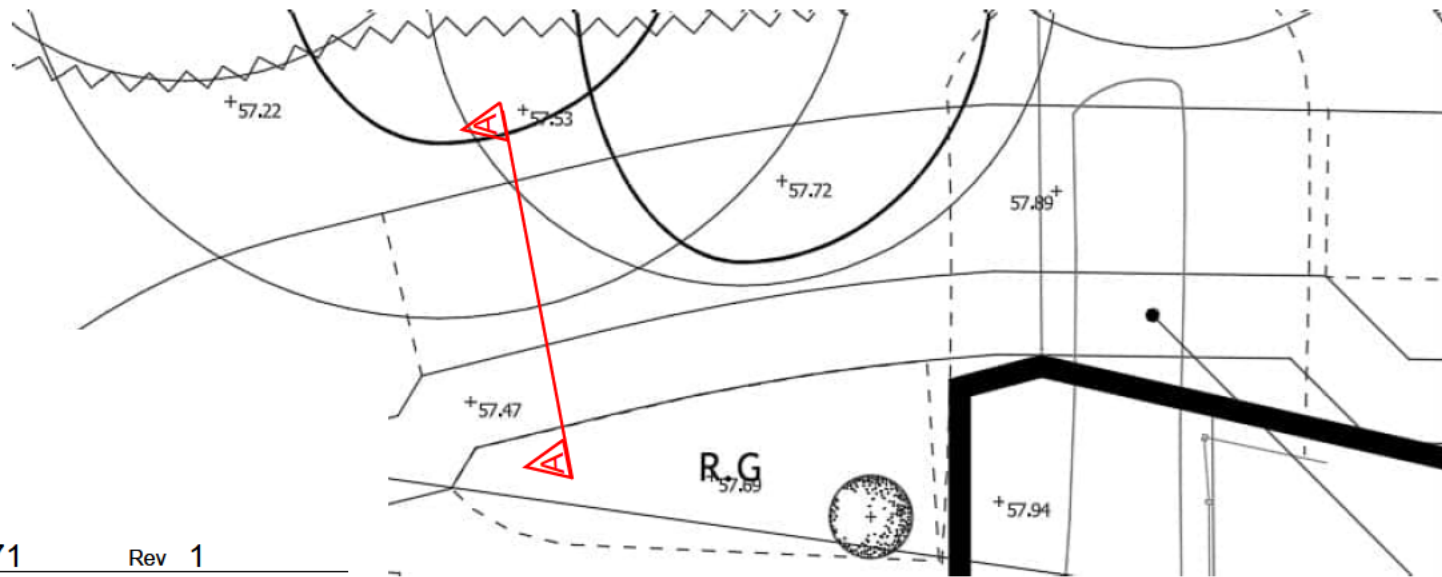
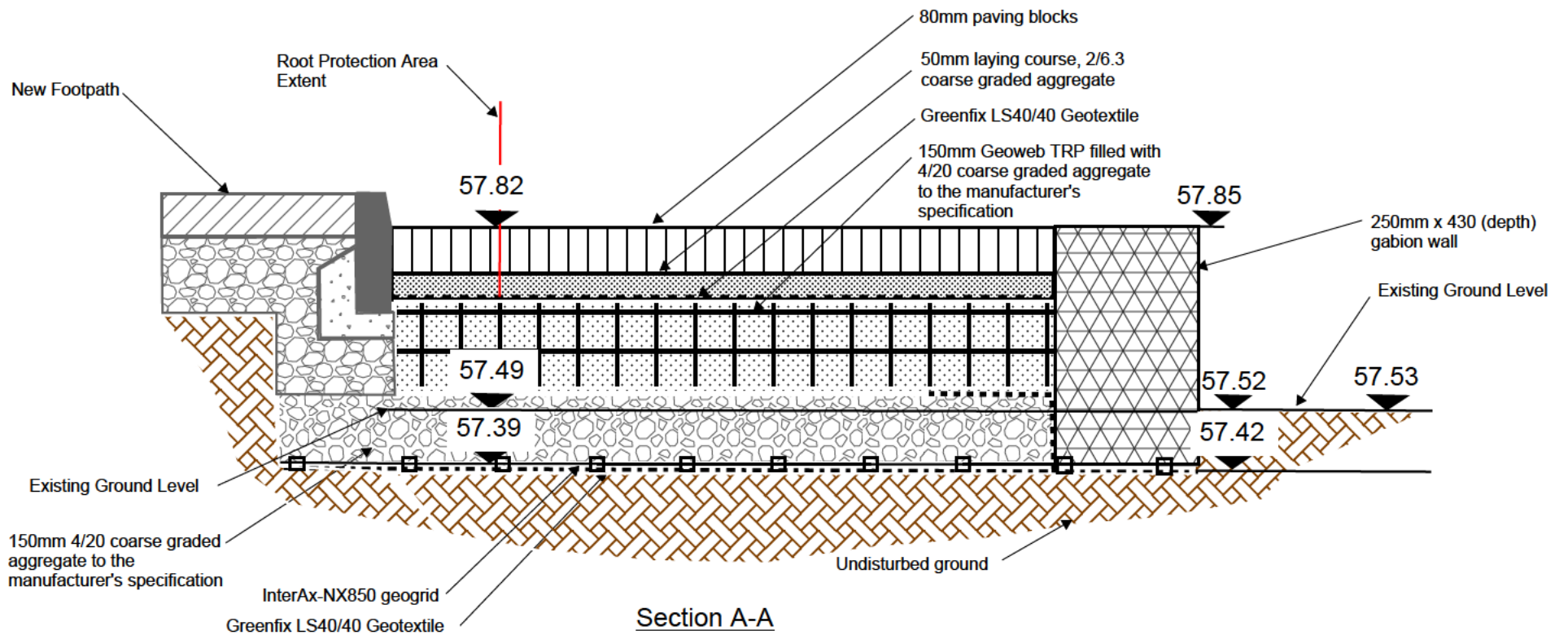
All the works associated with installation of the No-Dig roadway will be photographed by the ACoW and a post completion report will be prepared and submitted for review by the tree officer.

We recommend that the strip of land to the northern side of the roadway, to the south of the trees is mulched with composted woodchip preferably retained and recycles from site clearance treeworks. This mulch will serve to retain moisture and improve the soil biology and structure. During these works no machinery or vehicles will access the open ground to the northern side of the roadway

Conclusion

Based on the proposed roadway design, the age, size and location of the trees along with the tree species characteristics, the extent of the proposed no-dig roadway, the published guidance and my experience of working on installation of No-Dig roadways for over 25 years, I am confident that providing these guidelines are followed the proposed roadway can be installed without impacting on the health, stability and longevity of the retained trees.

Prepared by
Peter Wilkins BA(Hons) MArborA MEnvSc CEnv
July 2026

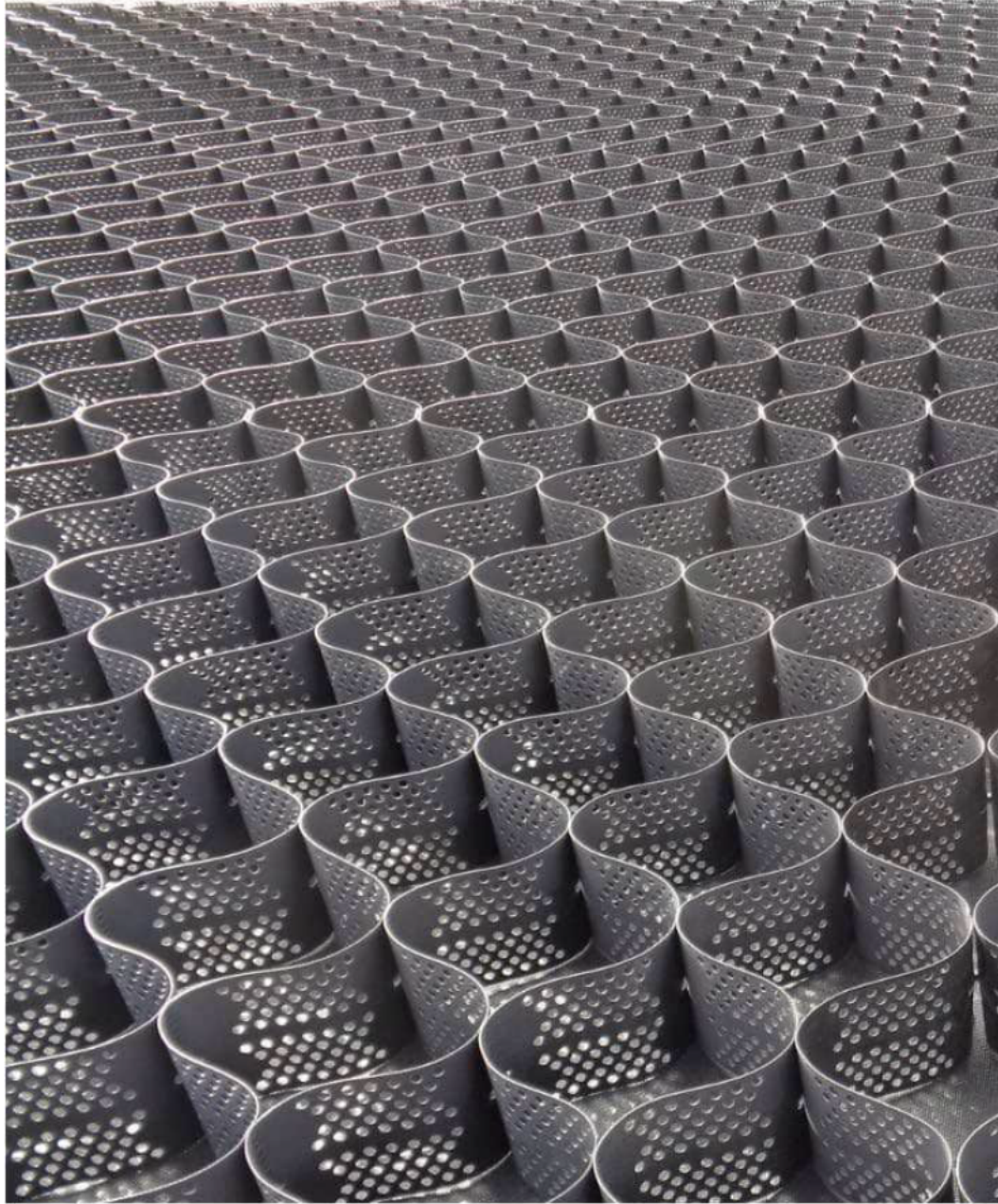


PRICE & MYERS

Job No. 31276 Page SK6071 Rev 1

Date 23/07/26 Eng DLin Chd

Job Land West of Worthing Road - Section



GEOWEB® GEOCELLS

Soil Stabilization System

PROPOSAL FOR THE COPSE

PR#26373

DATE: 7/14/2026

Engineering Submittal



CONTACT:

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July 14, 2026

Roy Partington
GREENFIX
Unit B1 North
Willow End Park
Blackmore Park Road
Welland
Malvern
WR13 6NN

RE: PR26373 THE COPSE
Load Support System

Dear Roy:

Presto Geosystems has completed the evaluation for The Copse Load Support System project. Our recommendations are provided and detailed in the attached cross section and calculation. The evaluation is copyrighted and based on the unique engineering properties of GEOWEB® system. Any use of this evaluation for any product other than that manufactured by Reynolds Presto Products, Inc. makes this evaluation invalid.

The objective of this evaluation is to propose a GEOWEB geocell system for stabilization of the base.

As the originator and leader in geocell technology, Presto Geosystems offers the following advantages:

- **Manufacturer Certificate of Analysis.** Presto Geosystems manufactures GEOWEB, ATRA® keys and ATRA Stake Clips in accordance with stringent ISO and CE quality standards. Our quality management system allows Presto Geosystems to provide Certificates of Compliance (COC) and Certificates of Analysis (COA) that allow traceability on all materials produced and supplied for this project. We do not provide geocell materials through private label manufacturers, which is often the case with our competitors. The ability for the Owner to receive COC and COA for geocell is critical to the integrity of the project.
- **Manufacturer Calculations.** The attached calculations are based specifically on GEOWEB material characteristics, research/testing and accessories. Our calculations are based on the site-specific characteristics and information contained in the request for project evaluation. The recommendations are based on GEOWEB panels, ATRA key connection device and ATRA stake



clips. The anchorage recommendations are specific to our product and DO NOT apply to any other geocell manufacturers.

- ATRA Key connection device. ATRA keys provide a permanent and stronger panel connection compared to metal staples or zip ties. ATRA keys are made of high-density polyethylene and are the strongest method available for panel connection. ATRA keys will not corrode or degrade and provide a permanent connection. ATRA keys were used to determine the anchorage recommendations. If a different connection device is proposed, the Presto Geosystems recommendation does not apply. ATRA keys allow multiple panels to be installed concurrently decreasing installation time and preventing panel separation during installation and compaction. Panel separation may occur with metal staples or zip ties during installation, which can lead to long-term maintenance issues.
- Installation Assistance. Representatives of Presto Geosystems, or the local distributor, are available to be on-site at the beginning of construction to ensure that the GEOWEB panels and accessories are installed as intended. We are committed to train the Contractor based on our in-depth product knowledge and installation experience. Our past project success will minimize installation time and issues. As with any material, there are advantageous techniques of installation, which we can offer during our visit.

The project evaluation has been developed using the parameters listed below. Please review the calculations to confirm that the data used reflects site-specific conditions.

Parameters:

CBR, %	1.0
Type of Sub Grade	Native
Vehicle	
Type	Emergency Vehicles
Wheel Loading, kN	88.9
Tire Pressure, kPa	868
Infill Friction Angle ϕ , degree	30
Infill Type	Crushed Aggregate
Infill Weight γ , kN/m ³	18



Based on the evaluation, the following materials are recommended for the GEOWEB application at the site.

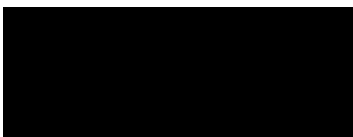
1. Prepare sub grade to a minimum CBR of 1.0%.
2. Provide a Greenfix LS40/40 enhanced woven geotextile separation layer on top of the sub grade and install in accordance with Manufacturer instructions including overlaps based on sub grade CBR.
3. Provide 150 mm base layer compacted in accordance to specifications. Wrap the ends of the geotextile around the base to prevent material loss.
4. Provide GEOWEB GW30V6 (150 mm) panels filled with suitable material.
5. Pre-shape the GEOWEB panels before infill placement.
6. Connect the GEOWEB sections with ATRA Keys at each interleaf and end-to-end connection.
7. The base, GEOWEB infill and wear surface shall be hardcore.
8. Limit the drop of infill into the GEOWEB panels to prevent distortion.
9. Overfill GEOWEB panels and compact to provide a minimum 50 mm wear surface and create side slopes to existing grade. Slope angle shall be set low enough to prevent global stability issues. Limit the drop of infill to prevent panel distortion.
10. Refer to the GEOWEB Load Support Installation Guide for installation procedures.

For additional Load Support Resources, click here:

[Load Support Engineering Resource Package](#)
[GEOWEB Load Support Installation Guide](#)

If you have any questions or need any additional information, please call.

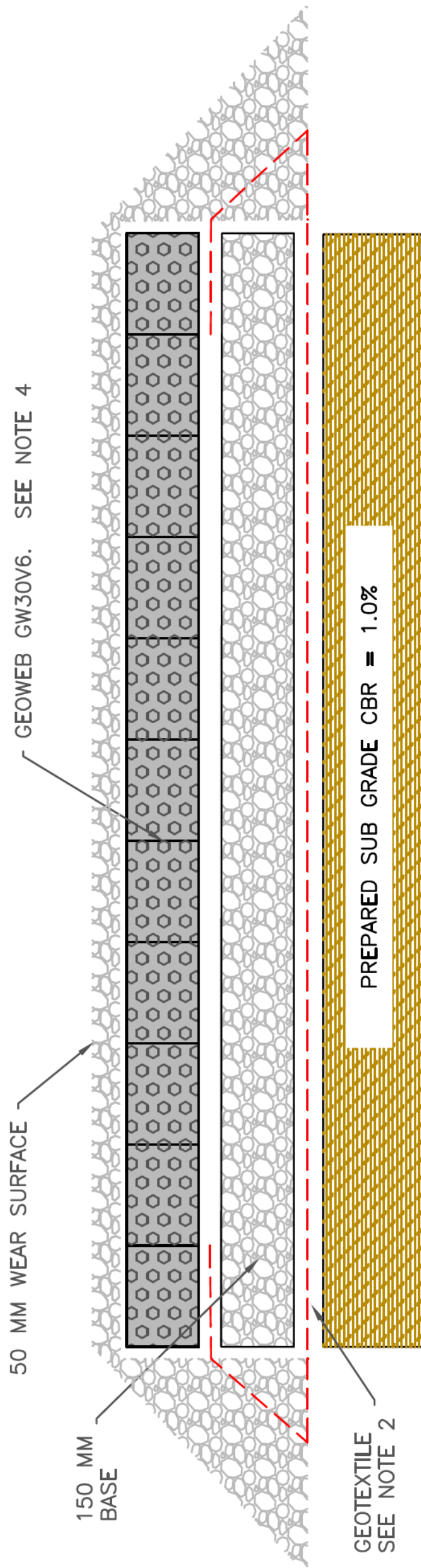
Sincerely,



Sam Justice, P.E.
Civil Engineer
Presto Geosystems

Notes:

1. This evaluation is copyrighted and is based on the use of GEOWEB® manufactured by Reynolds Presto Products, Inc. All rights reserved. Any use of this evaluation for any geocell product other than that manufactured by Reynolds Presto Products, Inc is strictly prohibited and makes this evaluation invalid.
2. Provide Greenfix LS40/40 enhanced woven geotextile separation layer and install per Manufacturer recommendations including overlaps based on sub grade CBR.
3. The GEOWEB panels shall be connected with ATRA® keys at each interleaf and end to end connection.
4. GEOWEB base and infill shall be hardcore. Overfill the GEOWEB panels and compact to provide a minimum 50 mm wear surface, and create side slopes to existing grade. Slope angle shall be set low enough to prevent global stability issues. Limit the drop of infill to prevent panel distortion.
5. Refer to the GEOWEB Load Support [Installation Guide](#) for installation procedures.



ATRA KEY

STRESS REDUCTION USING GEOWEB SYSTEM

PROJECT	PR26373 THE COPSE	DATE
		7/14/26

Layer Type	Layer Thickness (m)	Depth from Surface (m)	Radius of Loaded Area (m)	Stress at Bottom of Layer (kPa)	The GEOWEB System Benefit			
					Vertical Stress (kPa)	Horizontal Stress (kPa)	Stress Reduction (kPa)	New Stress (kPa)
Surface		0.00	0.18	868.00				
Wear Surface	0.05	0.05		851.50				
GEOWEB Layer	0.15	0.20		513.03	682.26	227.42	154.35	358.68
Aggregate	0.15	0.35		104.39				
2nd GEOWEB Layer	0.00	0.35		104.39	104.39	34.80	0.00	104.39
Aggregate	0.00	0.35		104.39				
Geotextile		0.35		104.39				

GEOWEB	Cell Size	Diameter, m	Depth (m)
	GW30	0.24	0.15

GEOWEB Infill	Type	Unit Weight (kg/m3)	Friction Angle	Added Stress (kPa)
Properties	Gravel	1,800	30	6.22

Below GEOWEB	Depth (m)	Unit Weight (kg/m3)	Shear Strength (kPa)	Reduced Stress (kPa)	Other Properties: CBR	Other Properties: R Value
Excavation	0.35	0				
Subgrade			29.9	0.00	1.00%	-3.99

Required Calculation Data	
Wheel Load (kN)	89 Emergency Vehicles
Tire Pressure (kPa)	868
Distribution Angle	45.00 H = 0 V = 0 OR Angle = 45
% Frictional Interaction	95.0%
Geotextile Type	Woven
Bearing Capacity Coefficient (N _c)	6.00
Factor of Safety	1.30

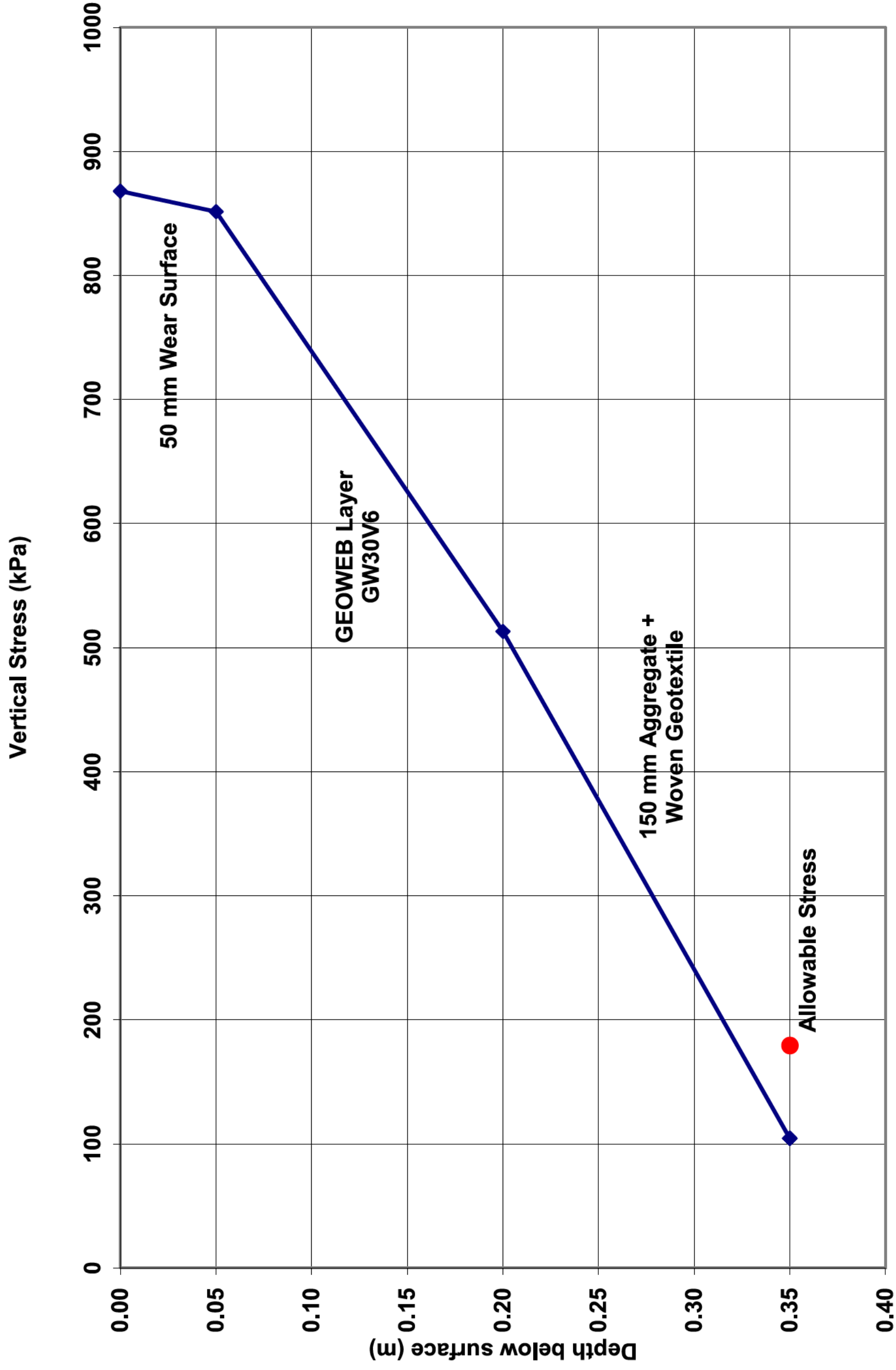
Calculation Results	
Distributed Stress on Subgrade per Calculation, Q _{distributed} (kPa)	110.61
Allowable Subgrade Stress, Q _{allowable} (kPa)	179.10
Calculated Factor of Safety	1.62 Acceptable

Hoop Stress Check (GEOWEB Mechanical Properties)				
Perforated Cell Wall:	9.62	FoS, Cell Wall Rupture	✓	
	12.82	FoS, Resistance to Peel	✓	Hoop Stress (kPa): 716.29
Internal Junctions:	19.24	FoS, Resistance to Shear	✓	Hoop Tension (kN): 0.16
	15.23	FoS, Resistance to Separation	✓	
	4.04	FoS, Resistance to Peel	✓	
Mechanical Junctions (ATRA Key):	6.90	FoS, Resistance to Shear	✓	
	5.25	FoS, Resistance to Separation	✓	
Results:	System Components Meet Project Requirements			

Limitation of Use:

The Evaluation is copyrighted and based on the use of GEOWEB® geocells manufactured by Reynolds Presto Products, Inc. All rights reserved. Any use of the Evaluation for any geocell product other than that manufactured by Reynolds Presto Products, Inc. is strictly prohibited and makes this Evaluation invalid. Reynolds Presto Products, Inc. assumes no liability resulting from the unauthorized use of this Evaluation. The recommendations in this Evaluation are based on the specific characteristics, structural values and specifications of GEOWEB geocells manufactured by Reynolds Presto Products, Inc.

PR26373 THE COPSE
GEOWEB System Stress Reduction



Product Specification - GEOWEB® GW30V6 Geocell

GENERAL

The GEOWEB A1geocell product is manufactured from textured, perforated strips of high density polyethylene that are bonded together to create a network of interconnected cells. The cells can be filled with topsoil, aggregate, concrete, recycled materials, or other infill material for geotechnical applications such as: 1) load support for unpaved and paved roads, railways, ports, heavy-duty pavements, container yard, and pads; 2) gravity and reinforced walls, reinforced slopes and fascia walls; and, 3) slope, channel, and geomembrane protection.

DIMENSIONS

Parameter	Units	Value
Cell Depth	Inches (mm)	6 (150)
Cell Size (Length x Width +/- 10%)	Inches (mm)	11.3 x 12.6 (287 x 320)
Expanded Section Width	Cells	8
	Feet (m)	Varies: 7.7 to 9.2 (2.3 to 2.8)
Expanded Section Length	Cells	18, 21, 25, 29, or 34
	Feet (m)	Varies: 15.4 to 35.1 (4.7 to 10.7)

STRUCTURAL INTEGRITY AND SYSTEM PERFORMANCE

Parameter	Units	Value
Minimum Short-Term Seam Peel Strength	lb (N)	480 (2,130)
Long-Term Seam Peel Strength (standard 4-inch sample width) ¹	lb (N)	160 (710)
Internal Junction Efficiency ²	%	≥ 100
Mechanical Junction Efficiency (ATRA Key Connection) ²	%	≥ 100
Peak Friction Angle Ratio (δ/ϕ) ³	Unitless	0.95

MATERIAL PROPERTIES

Parameter	Test Method	Units	Value
Polymer Density	ASTM D1505 or D792	lbs/ft ³ (g/cm ³)	58.4 - 60.2 (0.935 - 0.965)
Flexural Storage Modulus	ISO 6721	Mpa	≥ 800
Carbon Black Content ⁴	ASTM D1603	%	1.5 - 2.0
Sheet Thickness Prior to Texture	ASTM D5199	mil (mm)	50 (1.27), -5% +10%
Sheet Thickness After Texture	ASTM D5199	mil (mm)	60 (1.52), -5% +10%
Texture Surface Density	--	per/in ² (per/m ²)	140 - 200 (22 - 31)

DURABILITY

Parameter	Test Method	Units	Value
Environmental Stress Crack Resistance	ASTM D1693	hrs	> 5,000
Environmental Stress Crack Resistance (Accelerated Test)	ASTM D5397	hrs	≥ 400
Resistance to Oxidation ⁵	EN ISO 13438	yrs	≥ 100
Resistance to Weathering ⁶	EN 12224	%	100

Notes:

- 1) A 4 in. (100-mm) wide seam sample shall support a 160 lb (72.5 kg) load for a period of 7 days minimum in a temperature-controlled environment undergoing a temperature change on a 10 hour cycle from ambient room to 130° F (54°). Ambient room temperature is per ASTM E 41.
- 2) Junction efficiency determined as a percentage of junction performance (EN ISO 13426-1) to perforated strip performance (EN ISO 10319).
- 3) Typical design value for granular infill material. Consult with manufacturer to confirm value for other types of infill materials.
- 4) Standard black HDPE strips. For tan/green GEOWEB, hindered amine light stabilizer (HALS) content will be 2.0% by weight of carrier.
- 5) Predicted to be durable for a minimum of 100 years in natural soil with a pH between 4 and 9 and at a soil temperature ≤ 25°C.
- 6) 100% of original tensile strength retained following exposure to 370 hours of ultraviolet light and accelerated weathering in accordance with EN 12224.



Description:

The ATRA Key is designed to connect GEOWEB Geocell sections either end-to-end or side-to-side through the GEOWEB material slots (I-slots). The ATRA Key features a structurally reinforced handle and frictional barbs to enhance interlock with the GEOWEB surface texture, providing protection against the three primary modes of mechanical junction failure: shearing, splitting, and peeling. The ATRA Key is inserted through aligned I-slots of two adjoining GEOWEB sections and turned 90 degrees to lock the key in position. If removal is required, turn the ATRA Key 90 degrees from the locked position and remove the ATRA Key from the I-slots.

Material: Polymeric Composite Material

Construction: Injection Molded

Color: Black

Dimensions:

Length: 1.31 in. (33.15 mm)

Width: 2.05 in. (52.07 mm)

Thickness: 0.38 in. (9.65 mm)

Pull-Through Strength: 275 lbs. (1.3 kN)

Mechanical Junction Efficiency (Shear, Peel & Separation): 100%

Chemical Resistance: Comprised of nonreactive, chemically inert material

Other Properties: Mildew Resistant, Non-Corrosive

Conductivity: Non-Conductive



Figure 1 ATRA Key



Figure 2 ATRA Key Connection through cell wall I-slot

Greenfix LS4040 Woven Geotextile

Application and Benefits

Greenfix LS4040 is a woven geotextile, manufactured from polypropylene fibres. LS4040 is used as a separation and filtration layer beneath the Geoweb® Cellular Confinement System in Load Support applications.

Product Characteristics

Mechanical Properties	Test	Units	Values
CBR Puncture Resistance	EN ISO 12236	N	4,500
Tensile Strength – MD	EN ISO 10319	KN/m	40
Tensile Strength – CD	EN ISO 10319	KN/m	40
Elongation at Break - MD	EN ISO 10319	%	18
Elongation at Break - CD	EN ISO 10319	%	8
Dynamic Perforation (Cone Drop Test)	EN ISO 13433	mm	11
Hydraulic Properties	Test	Units	Values
Water Permeability (normal to the plane Vlh50)	EN ISO 11058	l/m ² /s	16
Characteristic Opening Size	EN ISO 12956	µm	180
Physical Properties	Test	Units	Values
Thickness at 2kPa	EN ISO 9863	mm	0.75
Weight	EN ISO 9864	g/m ²	164
Roll Sizes	-	m	2.62m x 50m & 5.25m x 100m
Predicted Minimum Durability	In Natural soils with 4<pH<9 soil temp <250C	Years	25



PRESTO

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INSTALLATION GUIDE

■ **simplified**



GEOWEB® Load Support System



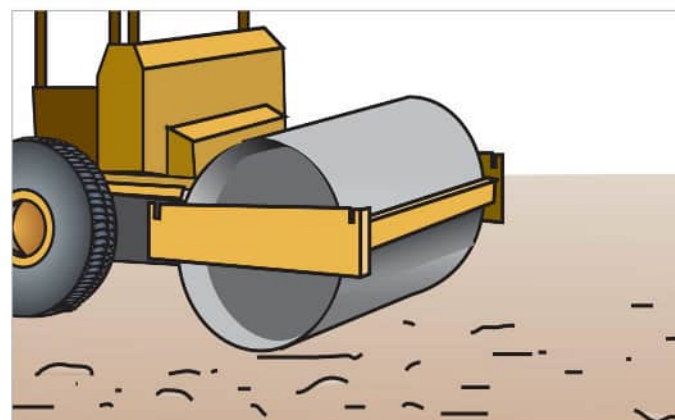


GEOWEB® Load Support System

1 Prepare subgrade as specified. Remove debris and rocks.



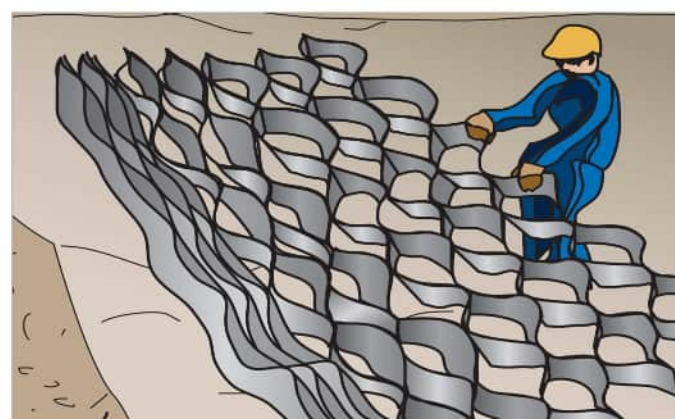
2 Compact subgrade as specified.



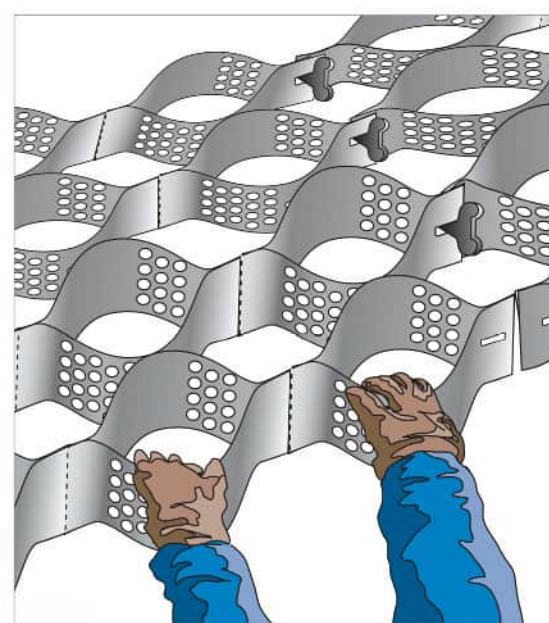
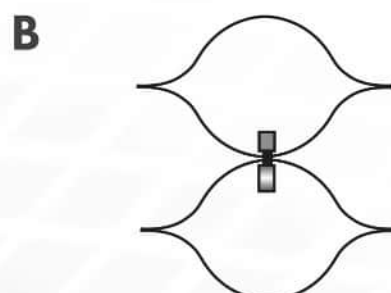
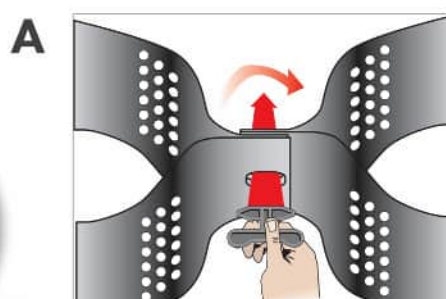
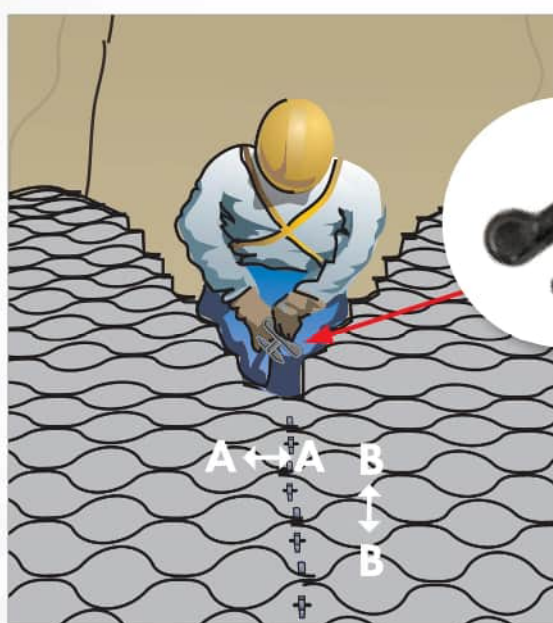
3 Install geotextile (per manufacturer's recommendations including overlaps).



4 Partially expand GEOWEB sections.



5 Connect GEOWEB sections with ATRA® Keys. Connect side-to-side (A) and end-to-end (B).



IMPORTANT NOTE:

The simplified installation guide provided by Presto Geosystems is intended as a general guideline only. The contractor shall follow contract plans and specifications and refer to detailed installation guidelines for more information: See www.prestogeo.com/installation

- 6 Hold sections open. Use Options A, B, C or D.

A T-Bars



B ATRA® Anchors or Speed Stakes



C Wood Stakes



D Infill Select Cells



- 7 Infill GEOWEB® cells. Limit drop of infill to prevent panel distortion.



- 8 Spread infill.



- 9 Compact infill as specified.



Detailed installation guidelines at: www.prestogeo.com/installation

PRESTO



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Since 1979

MATERIAL LIST

ATRA® ANCHORS



ATRA KEY



LIMITED WARRANTY

Presto Geosystems warrants each GEOWEB® section which it ships to be free from defects in materials and workmanship at the time of manufacture. Presto's exclusive liability under this warranty or otherwise will be to furnish without charge to Presto's customer at the original f.o.b. point a replacement for any section which proves to be defective under normal use and service during the 10-year period which begins on the date of shipment by Presto. Presto reserves the right to inspect any allegedly defective section in order to verify the defect and ascertain its cause.

This warranty does not cover defects attributable to causes or occurrences beyond Presto's control and unrelated to the manufacturing process, including, but not limited to, abuse, misuse, mishandling, neglect, improper storage, improper installation, improper alteration or improper application.

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