Ece®
EMPRESA DE CONTROL DE EROSIÓN

geosoluções
REPRESENTATIVE IN PARAGUAY



GEOTECHNICAL ENGINEERING · REINFORCED SOIL · RETENTION

Reinforced soil systems
Geo Soluções

StrataSlope™ and Lock+Load™ walls, AcquaPex®, GeoPex, the Displacement Embankment and BlindaSolo® — leading Brazilian geotechnical engineering, now applied in Paraguay by Ece.

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01 BRAZILIAN GEOTECHNICAL ENGINEERING

Geo Soluções Engenharia Geotécnica (São Paulo, Brazil) is Strata's partner and representative in South America: a specialist engineering firm that designs, manufactures and builds reinforced soil, retaining and lining systems for the most demanding infrastructure on the continent — motorways, railways, ports and mining.

Its hallmark: **complete solutions with the engineering included** — from the wall calculation to support on site. Ece brings that capability to the Paraguayan market, combining it with our crews and the Synthetex, Strata and Profile lines.

> **Flagship projects:** retaining walls on road and rail corridors in Brazil (RUMO), restoration of the Orla de Matinhos/PR waterfront and port structures — the regional benchmark in reinforced soil.

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LINES: WALLS, ACQUAPEX, GEOPEX, DISPLACEMENT EMBANKMENT, BLINDASOLO

Strata
THE MANUFACTURER'S REGIONAL PARTNER

BR·PY
GEO SOLUÇÕES + ECE ALLIANCE

100%
DESIGN VERIFIED BY ENGINEERING



Railway project with Lock+Load walls — Brazil


Large-scale StrataSlope™ — protection of infrastructure and settlements · photo: Geo Soluções

02 REINFORCED SOIL WALLS

StrataSlope™ — green retention

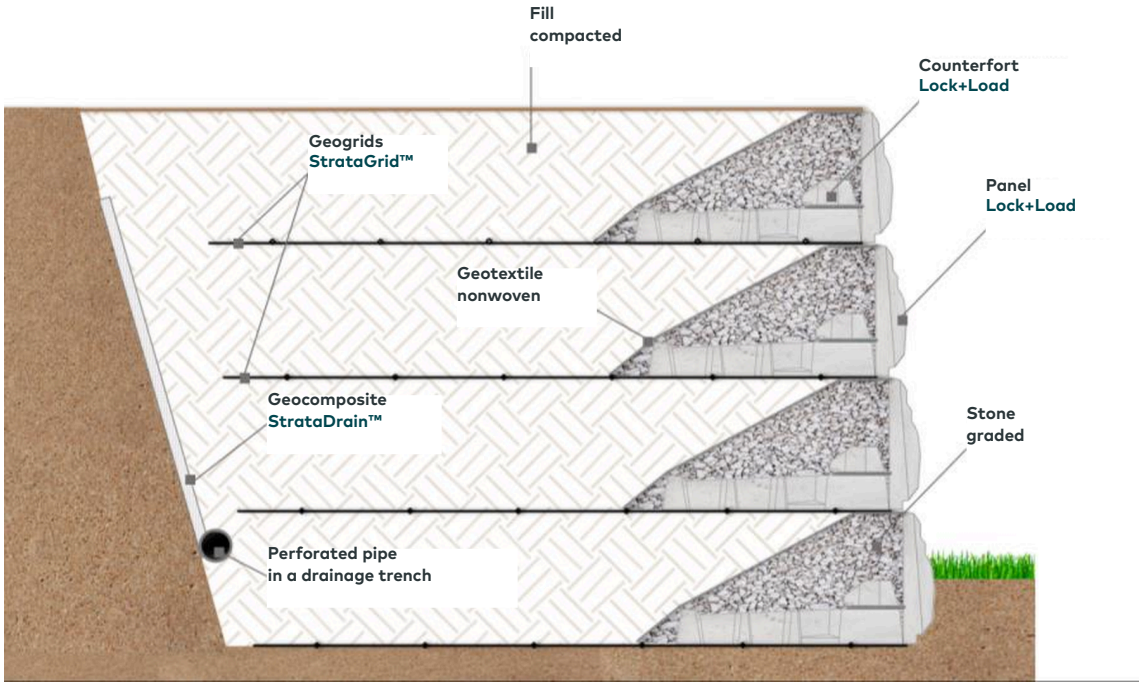
Reinforced slopes and walls up to 80° with StrataGrid™ geogrids and galvanised welded-mesh modules that remain as the face, vegetated or stone. It uses site soil as the main material, with no hauling of quarry fill, and blends into the landscape.

GREEN OR STONE FACE · UP TO 80°

Lock+Load™ — panel and counterfort

MSE walls of concrete modules (panel + counterfort) with StrataGrid geogrid. No formwork and no cranes; FHWA/AASHTO design with SF >2.0 against overturning. The units can be made locally under licence.

FHWA-NHI-00-043 · LOCAL MANUFACTURE



The complete system: Lock+Load module, StrataGrid™ geogrid, separation geotextile, StrataDrain™ geocomposite and toe drain



Finished Lock+Load wall on a road corridor · photo: Geo Soluções

03 THE COMPLEMENTARY LINES

AcquaPex® — Geomembranes

Reinforced HDPE + LDPE membrane (Rafitec): 700 microns, 40/40 kN/m and CBR puncture of 5,275 N. A 7-year warranty; a Pro line for higher demands.

LINING

Style 50x50 woven geotextile — GeoPex line

Rafitec/Propex's reinforcement line: style 50x50 with 2,778 N/5cm in both directions and 265 g/m². Separation, platforms and sediment containment.

REINFORCEMENT

Displacement Embankment

Bolted modular mats that spread the load over soft soils: the works get into the marsh, the plant runs and the mats are recovered at the end.

SOFT SOILS

BlindaSolo® BS Plus

A chemical soil stabiliser: it raises the CBR and the cohesion by cation exchange, with no stone to haul. The only system that works even in the rainy season.

CHEMICAL STABILISATION



Agricultural reservoir lined with AcquaPex HD — aerial view



Displacement-embankment mats over soft soil · photo: Geo Soluções



Road stabilised with BlindaSolo®, with no stone haulage · photo: Geo Soluções



AcquaPex® in industrial containment · photo: Geo Soluções

04 GEO SOLUÇÕES IN PARAGUAY, WITH ECE

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RESPONSIBLE: DESIGN + SUPPLY + WORKS	ECE PROJECTS IN PARAGUAY	INTEGRATED LINES: STRATA · SYNTHETEX · PROFILE	COST OF THE TECHNICAL VERIFICATION

The retention that was missing from the catalogue. With Geo Soluções, Ece completes its offer: reinforced soil walls with proven Brazilian engineering — all with the same logic as always: **a single party responsible from the calculation to handover**.

Send us the ground profile and the loads: we send back the sized solution (StrataSlope, Lock+Load or a combination), with a quotation for supply and installation.

> **Total synergy:** a Lock+Load wall + StrataDrain drainage + Profile hydroseeding on the crest + HYDROTEX mattresses at the toe — the four brands of the Ece catalogue working together on one project.



The stacked module and the geogrid that anchors it to the mass — a Lock+Load wall under construction

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WHY THE LOCK+LOAD MODULE

CONSTRUCTION
Execution **3× faster** than segmental blocks or reinforced earth.

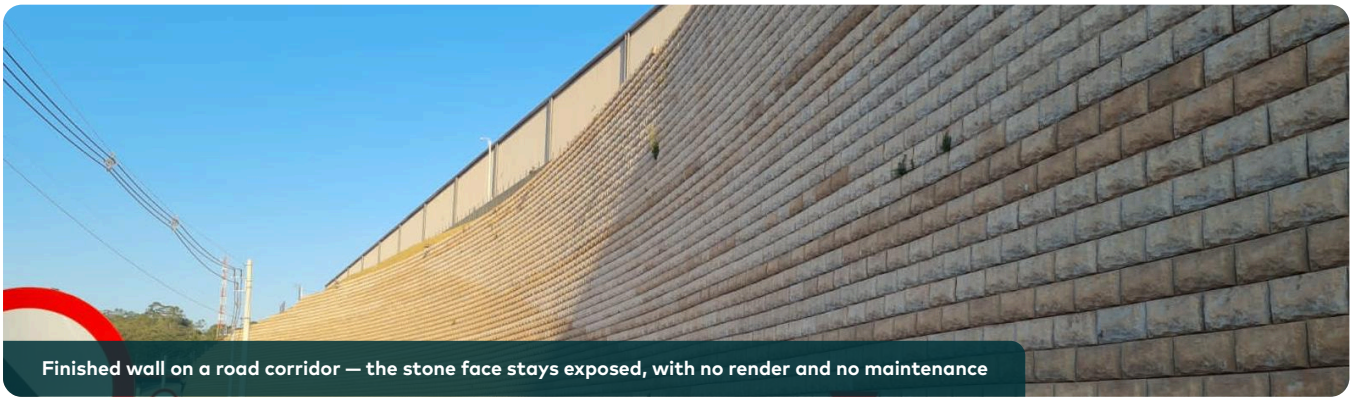
COST-BENEFIT
30% cheaper than segmental blocks and mechanically stabilised earth.

PRODUCTIVITY
Construction process **mechanised**, not piece by piece.

EFFICIENCY
Panel face **3× greater**: fewer units per m² of wall.

EASE
The modules can be **be made on site** under licence.

NO LIFTING
The weight to face-area ratio allows **install without a crane**.



Finished wall on a road corridor — the stone face stays exposed, with no render and no maintenance