ATWEB

INTRODUCTION

Introducing **ATWEB**, that brings unmatched strength and versatility to your projects. This unique system features heavy-duty polymeric strips that are ultrasonically welded into a robust honeycomb structure, providing exceptional confinement.

ATWEB's expanded form can be filled with soil or concrete, tailored to your project specifications. Originally introduced by the U.S. Army Corps of Engineers in 1975, Geocell technology was developed to overcome the challenges of constructing roads on soft soil. Extensive research has shown that **ATWEB's** soil confinement system outperforms conventional crushed stone sections, offering faster construction in any weather condition.

By utilizing **ATWEB** filled with infill material, you can gain the advantage of double the thickness of unreinforced gravel bases. This results in superior reduction of lateral spreading under loading compared to conventional reinforced bases.

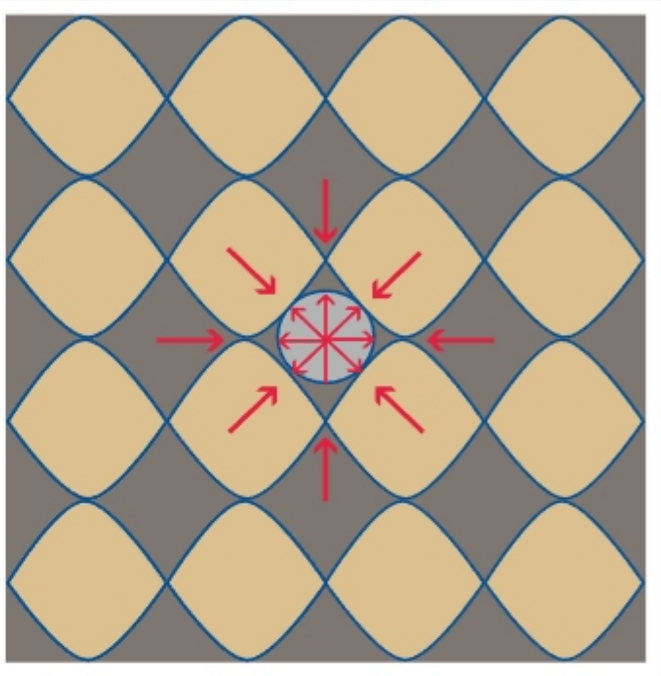
Transportation and construction are made effortless with **ATWEB's** accordion-fold design. On-site, it can be expanded and filled with various materials such as sand, stone, or any soil type. The three-dimensional cellular structure allows for customization, offering flexibility in size and configuration while creating an ideal environment for vegetation.

Choose **ATWEB** to elevate your project for new heights with A&T Engineering's cutting-edge geosynthetic solutions.

WORKING MECHANISM

ATWEB, the ultimate solution for enhanced mechanical and geotechnical properties. By filling **ATWEB** with infill material, you create a composite confined system that revolutionizes load support applications.

The ingenious design of **ATWEB** restricts lateral spreading of soil under subjected loads. The confinement effect, driven by three key mechanisms—active earth pressure within the loaded cell, passive earth pressure in adjacent cells, and hoop stresses in the cell walls—ensures superior performance.

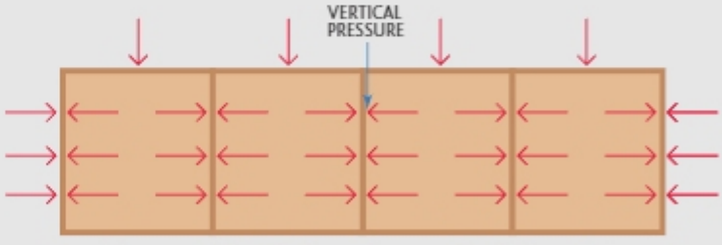


Plan view of expanded dimension

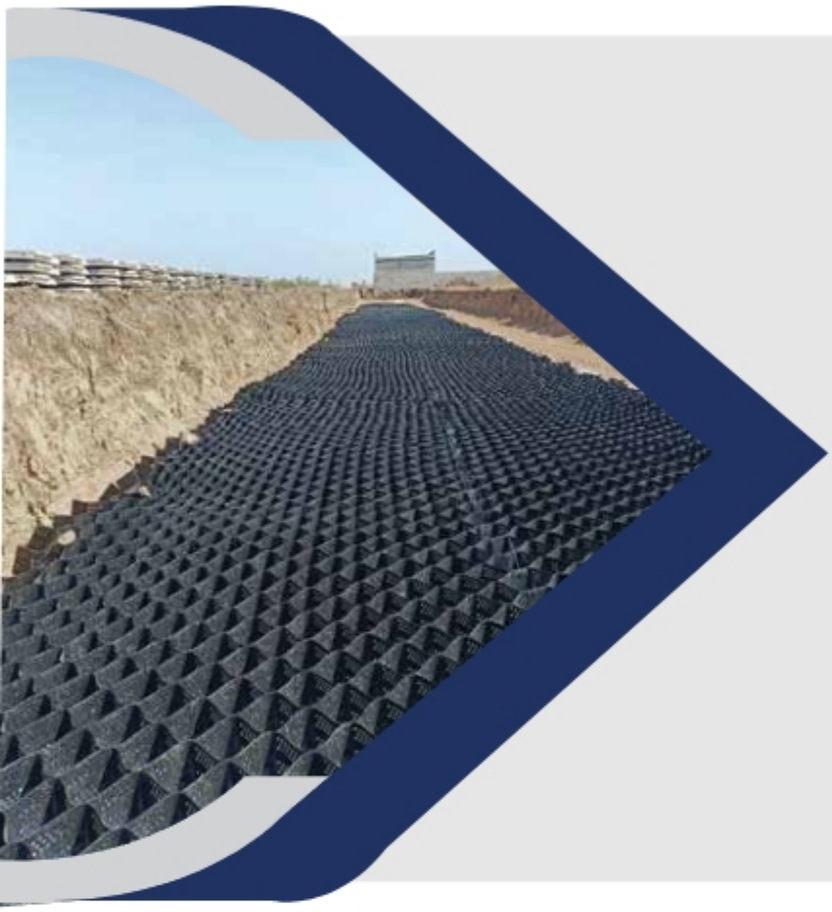
Experience a range of benefits that optimize your project's success:

- Create a rigid mattress or slab to efficiently distribute loads across a wider area.
- Safeguard against punching of soft soil, enhancing stability.
- Boost shear resistance and bearing capacity, reinforcing structural integrity.
- Minimize deformation, ensuring long-lasting performance.

Experience the versatility of **ATWEB**. With its perforated design, **ATWEB** serves a dual purpose as both a confining and reinforcing system, while also providing effective drainage. For added functionality, non-woven geotextile can be utilized to separate dissimilar materials on soft ground.



Cross sectional view of expanded dimension

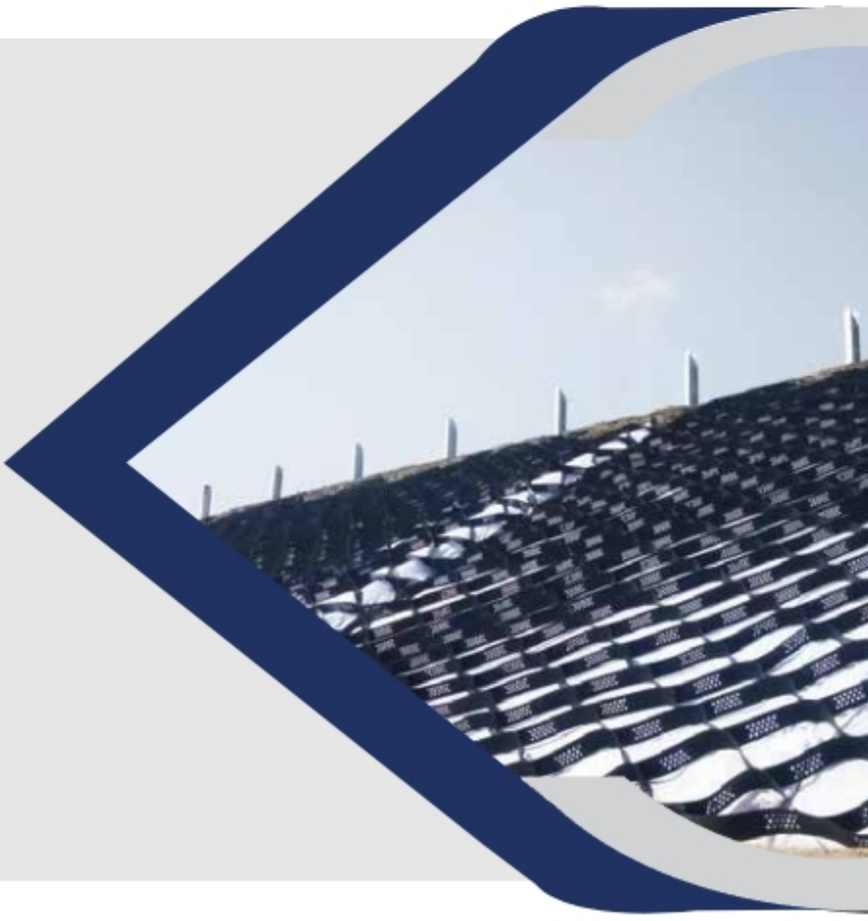


WHY ATWEB?

- Cutting-edge, fully automated ultrasonic welding machine for advanced manufacturing.
- Utilization of premium raw materials to ensure superior product quality.
- Comprehensive testing laboratory to meet and exceed global standards.
- Global delivery of top-notch products and services to customers worldwide.
- Customizable cell size and weld spacing for enhanced versatility.

ATWEB, a distinctive and high-quality product showcasing our expertise in providing exceptional solutions for soil stabilization, erosion control, and infrastructure development, setting us apart as a leading manufacturer in the industry.

ATWEB exemplifies our commitment to excellence, offering unparalleled quality for soil stabilization, erosion control, and infrastructure development. Our expetise and dedication shine through in every **ATWEB** produced, making A&T Engineeing the go-to choice for customers seeking innovative and reliable solutions in the industry.

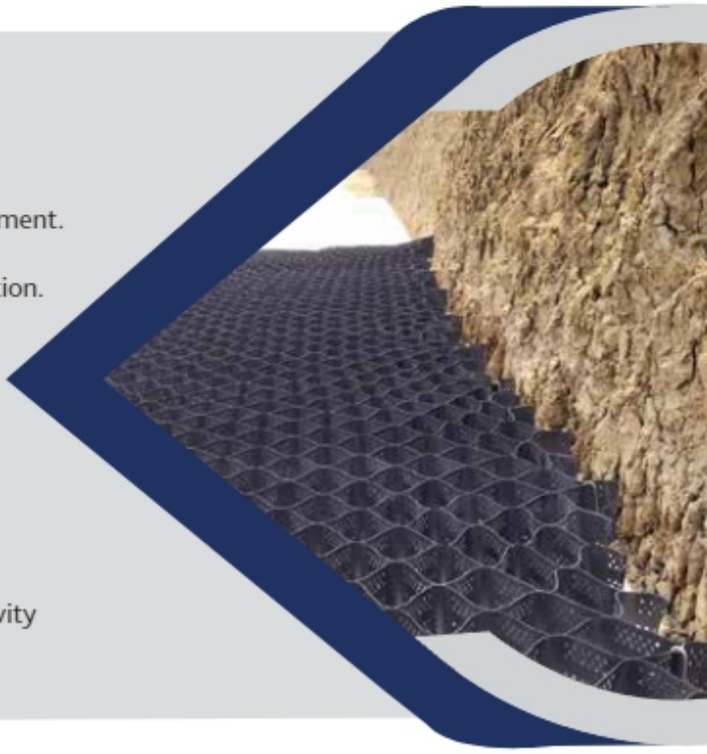


BENEFITS OF ATWEB

- Ease-to-cut ATWEB provides damage-free reinforcement for steep slopes.
- Vegetated for aesthetic appearance or left with lean concrete as per project requirements.
- Effective ground improvement solution for soft ground.
- ATWEB in pavement reduces thickness, extends design life, and lowers project costs.
- Portable flat strip design minimizes logistics, reducing carbon footprint.
- Unique three-dimensional geosynthetic product with exceptional properties.
- Requires no skilled labour and can be installed in any weather condition.
- Infill options include non-cohesive or locally available recycled materials.

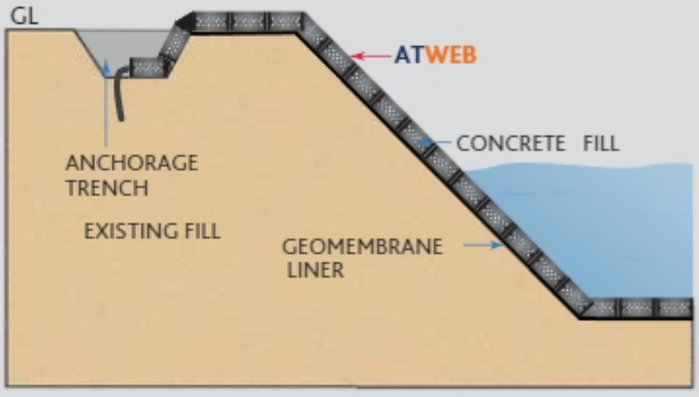
APPLICATION OF ATWEB

- Enhance vegetative slope confinement and erosion control.
- Strengthen road and pavement structures for superior reinforcement.
- Safeguard steep slope surfaces with reliable protective stabilization.
- Provide protective linings for channels and hydraulic structures.
- Ensure static and dynamic load support on weak subgrade soils.
- Offer earth retention solutions for banks and slopes.
- Protect reservoirs and landfills with robust measures.
- Construct multi-layered earth retaining and water retaining gravity structures with confidence.



CHANNEL PROTECTION

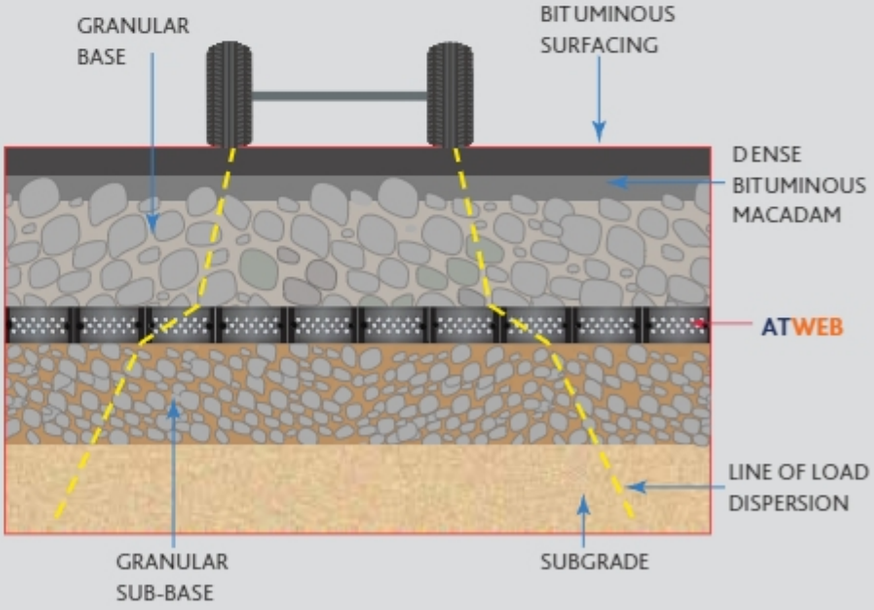
ATWEB, filled with concrete after installtion can be used for protecting geomembrane linings in canals and reservoirs. Required concrete depth is maintained with no chances for over pours or under pours. This is more ideal solution for severe hydraulic conditions rather than preformed concrete systems. In channel protection, multiple infill material can be used on the same panel based on flows. Bottom can be filled with concrete to accommodate higher velocities and then can be transited to soil showing natural vegetation at the top.



LOAD SUPPORT

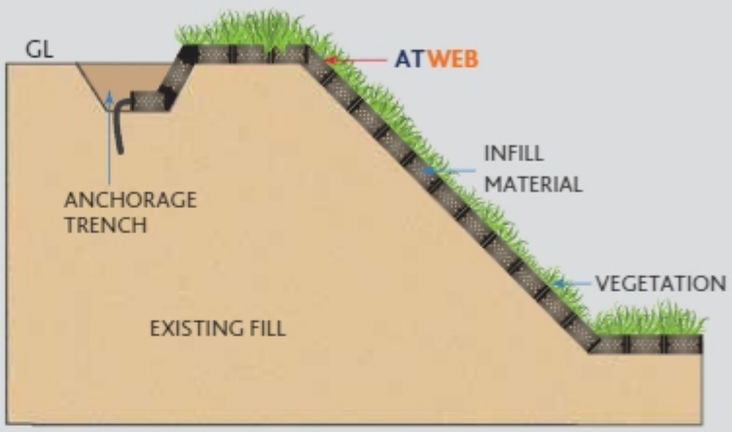
Vertical pressures can lead to fatigue and rutting. This either demands the increased thickness of pavement or reduce the life of pavement ultimately pose the durability of structure. Provision of **ATWEB** within pavement layer solves both problems and also minimizes the project cost:

- **Strength Amplified: ATWEB**, nestled within the pavement layer, fortifies your roads. Saygoodbye to cracks and potholes.
- **Settlements Squashed: ATWEB's** soil - filled ability minimizes settlements, ensuring a smooth ride for all.
- **Cost-Effective Brilliance: ATWEB** enhance pavement life and it also minimizes the project costs.



SLOPE PROTECTION

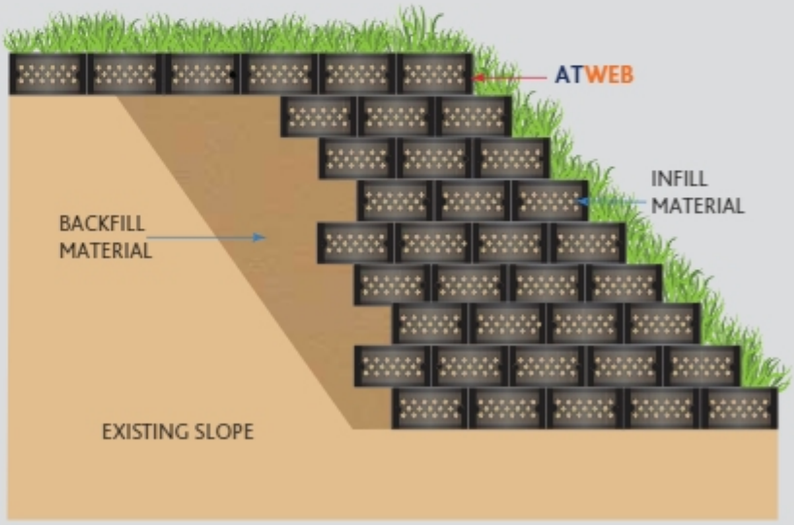
ATWEB is the best choice for slope stability to enhance your construction quality. **ATWEB** with local soil or granular material shall be placed on cut or fill slope to hold top cover soil and allow vegetation to grow. Compared to riprap system which is costly for client and poses handling problems for labour. Cellular confinement is better, economical and can be used in any weather conditions. Provide protection of slope over wing wall in partial height RS walls, wing walls are constructed to join structure along the carriageway and longitudinal walls along the road. **ATWEB** filled with concrete can be laid above wing wall for the slope protection over it.



EARTH RETENTION

Discover the ultimate solution for retaining earth with **ATWEB**:

- **Backfill Brilliance:** Just like a trusty gravity wall, ATWEB, filled with granular soil, keeps your earth in check.
- **Pressure-Proof**: Perforations provided in ATWEB ensures smooth dissipation.
- **Green Aesthetics:** After laying ATWEB on slopes, let nature take over. Vegetate those exposed surfaces for a stunning look.



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