

StrataVault®

Structural Root Cell



Creating Cities
Where Urban Meets Nature

Our Innovation Your Solution

StrataVault® advanced structural root cells are engineered to keep trees healthy in ensuring the long term success of urban trees. StrataVault® tree pits allow root systems to overlap and share space, reducing installation times and cost while promoting healthy root growth. The system provides quality soil for healthy tree roots in built up areas by preventing soil compaction caused by building structures, vehicular traffic and heavy pedestrian footfall. Strong in compression and durable over time, StrataVault® boots fast set-up time and is a cost effective solution to enhance urban landscapes.

StrataVault®

StrataVault® is an extremely high strength module for support of pavements and traffic loads while providing large volumes of uncompacted soil for healthy tree root systems and water harvesting.



Assembled StrataVault® matrix

About StrataVault®

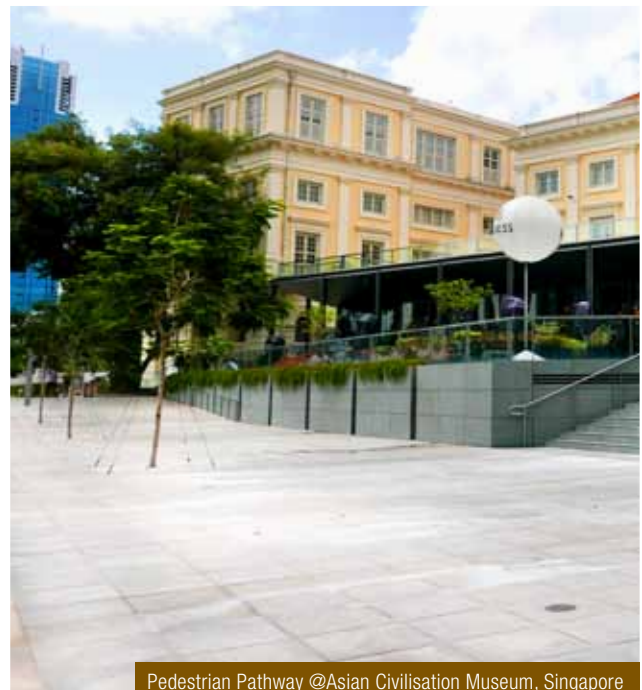
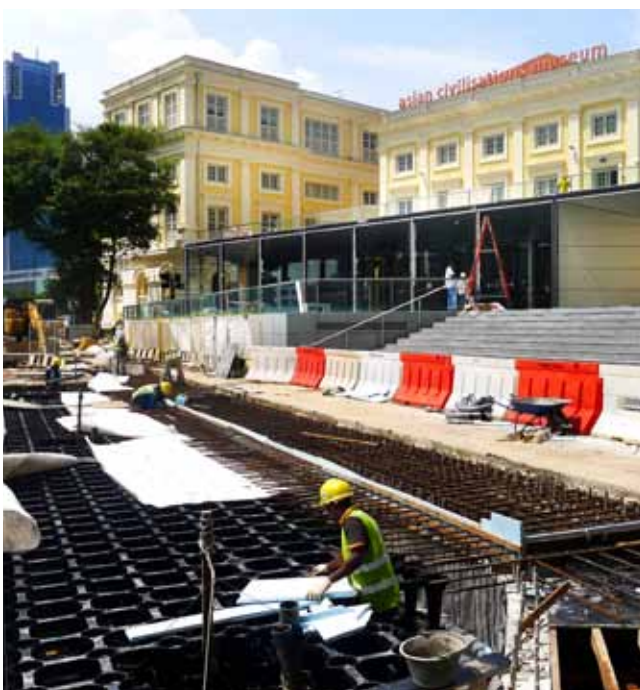
Modular StrataVault® system employs advanced design geometry and reinforced copolymers to produce an incredibly robust, skeletal matrix. This matrix has been tested by Finite Element Analysis, as well as physical Ultimate Load tests at university. These test results have been verified by consulting engineers to provide adequate support for pavement loads. This patented design integrates an array of essential features, making it the most advanced structural module of its type globally.

Immense compressive load bearing capacity is achieved by combining columnar design geometry with recycled, reinforced co-polymer materials.

Due to the positive lateral and vertical connectors, an assembled StrataVault® matrix also has excellent lateral strength. The octagonal modules are placed and connected rapidly and simply, with minimum skilled labour required.

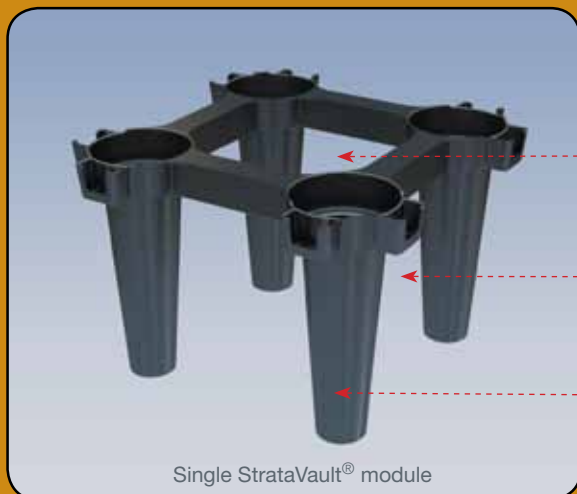
Large spaces between the columns provide generous avenues for root growth in all directions, and volume within the columns is open and readily accessible for feeder and structural tree roots.

The environmentally-critical design parameters have resulted in an extremely strong module made from recycled material, which leaves over 90% of its total volume for root growth and stormwater harvesting.



Pedestrian Pathway @Asian Civilisation Museum, Singapore

Distinctive Features



Large, open structure for soil and filter media loading

Generous openings for larger services and pipe systems

Highly engineered columnar structure for compressive strength and rigidity

Vertical connectors, for interlocking layers of **StrataVault®** Modules

Removable bridging connectors

Lateral connectors, for connecting individual modules

Advanced columnar design geometry

Foot plate, for minimised pressure at base



Queen Elizabeth Walk, Singapore

Technical Specifications

Material	100% recycled polypropylene
Dimensions	600 mm (L) x 600 mm (W) x 404 mm (H)
Capacity	
Free Volume	Above 90%
Ultimate Load Strength (FEA & lab tested)	300 kPa

Important Note:
Request StrataVault® Construction Details for matrix dimensions in plan and elevation

Applicable Areas

- Carparks
- Roadways
- Footpaths
- Plazas
- Medians

Advantages

Lower Cost Installation

StrataVault® has been designed to achieve major reductions in installation costs. Units snap together quickly and easily, with labour times being reduced drastically.

Economical Shipping

The innovative nesting design feature significantly reduces the volume for freight.

High Compressive Load

Designed to support enormous vertical loads, so that tree root systems can be brought closer to the pavement surface.

Strong Structure

Units lock together to form a monolithic structure with excellent modular strength, both vertically and laterally.

Secured Interlocking Feature

Positive and secure connectors are a feature of the StrataVault® patented design both vertically and laterally. StrataVault® modules are simple and fast to click together, producing an integrated matrix.

Environmentally Friendly

StrataVault® structural modules are made from 100% post industrial waste, thereby utilising material that could have been consigned to landfill.

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