FERGUSON
WATERWORKS

CITYGREEN® STRATAVAULT™

STRUCTURAL SOIL VAULT SYSTEM DISTRIBUTED BY FERGUSON WATERWORKS

CITYGREEN® SYSTEMS ARE DEDICATED TO THE SUCCESSFUL ESTABLISHMENT OF TREES IN CITIES.

ADVANCED STRUCTURAL SOIL CELL SYSTEM FOR TREE PITS

Citygreen's 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 third-party physical Ultimate Load tests. These test results have been verified by consulting engineers to provide adequate support for pavement loads.

TREE ROOT SYSTEMS

Tree root systems are much more extensive than you may realize. Current accepted knowledge is that the roots typically occupy an area two to three times greater than the radius of the tree canopy. Root systems also occupy a relatively shallow soil strata, being the top 16" to 32" of soil. Presence of oxygen is of prime importance, with a huge volume of fibrous feeder roots gathering oxygen, moisture and minerals for the life of the tree, while large structural roots provide anchorage and balance for the huge leafy structure above ground.

WHY DO TREES OR PAVEMENTS FAIL?

Tree failure is common the world over. Possibly the worst culprit is simply insufficient quality soil volume, followed by soil compaction, insufficient drainage, lack of aeration and restrictive pavement openings. Other factors include neglect during establishment, vandalism, windthrow, drought and pollution. The heartening news is that all these factors can be anticipated at design stage.

TREE ROOT SYSTEMS NEED SOIL

Soil volume requirements for trees can be estimated using several methods. As stated earlier, a root system in a natural environment can extend two to three times the radius of the tree canopy. The simplest way of calculating a minimum required soil volume is to take the projected canopy area of the mature tree and multiply it by a depth of 2.0 feet. The shape of this area can be configured to suit the location.

STRATAVAULT APERTURES ARE LARGE ENOUGH TO PERMIT SOME COMMON CONDUITS, SERVICE PIPES AND AERATION SYSTEMS TO BE INCORPORATED WITHIN THE STRUCTURE.

GROWTH ZONE

Stratavault, the sixth generation Root Cell, has an open skeletal structure for optimal root growth without sacrificing the structural integrity of the matrix. The design permits some common conduits, service pipes and aeration systems to be incorporated within the structure.

COMPARED TO ROCK/SOIL MATRIX

Early research utilized a rock and soil matrix to provide support for pavement, while permitting some root growth within the pavement. Citygreen has moved this principle forwarded by replacing the rock with engineered modules. Whereas the structural component in rock and soil mix occupies 70 to 80% of the pit, with Citygreen systems, the structural component occupies 10% of the pit volume. To achieve similar volumes of growing media, you would need five times as much rock and soil mix compared to Stratavault.

RECYCLED MATERIAL

Citygreen systems are dedicated to the reduction of harmful waste. Stratavault structural modules are made from 100% post-industrial waste, thereby utilizing material that could have been consigned to landfill.

STRATAVAULT EFFICIENCY

LOWER INSTALLATION COSTS–Stratavault units snap together quickly and easily to speed along the installation process.

NESTING/SHIPPING–The unique nesting design significantly reduces the packaging volume required to ship.

RAISED FOOTPLATES–Stratavault offers a flat footplate and raised footplates in 8" or 16" increments to increase flexibility and provide a more cost-effective design.

8 INCH

16 INCH

TECHNICAL ASSISTANCE AND DESIGN

ENGINEERING DESIGN ASSISTANCE–Layout design assistance is a free service that provides an initial consultation and a detailed and dimensioned set of plans showing both plan and sectional views for your project documentation.

SITE VISITS AND TRAINING–As part of the warranty approval, Citygreen provides training services via an online portal system. Ferguson representatives are available to provide pre-construction meetings and occasional site visits. Additionally, Citygreen utilizes a mobile app to allow contractors to upload checkpoint images and questions to Citygreen. This firsthand interaction allows contractors, landscapers and owners peace of mind about project completion and long-term performance.

PRODUCT SPECIFICATION

HOW THEY WORK–Structural Cells are modular units that form a skeletal matrix that supports pavement loads while storing a large volumes of soil within the structure for root growth.

COMPRESSIVE LOAD–Stratavault modules have been designed to support vertical loads so tree root systems can be brought closer to the pavement surface.

LATERAL LOAD–Stratavault units lock together vertically and laterally to form a monolithic structure and address lateral forces.

INTERLOCKS–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.

Product	Description	Material	Ultimate Load Capacity
Stratavault 30	High-strength structural vault system	100% recycled PP	43.5 psi
Stratavault 45	Ultra high-strength structural vault system	100% recycled ABS	65.2 psi

Contact your local sales associate:

Call **866-684-9177** or visit **FERGUSONGSS.COM** to get started.

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