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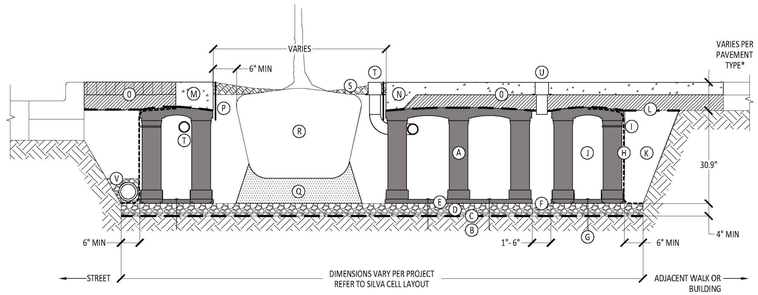

SILVA CELL SYSTEM 2X

NOT TO SCALE

KEY PLAN

- (A) SILVA CELL SYSTEM (DECK, BASE, AND POSTS)
- (B) SUBGRADE, COMPACTED
- (C) GEOTEXTILE FABRIC, PLACED ABOVE SUBGRADE
- (D) 4" MIN AGGREGATE SUB BASE, COMPACTED TO 95% PROCTOR
- (E) SILVA CELL BASE SLOPE, 10% MAX
- (F) 1" TO 6" SPACING BETWEEN SILVA CELLS AT BASE
- (G) ANCHORING SPIKES, CONTACT DEEPROOT FOR ALTERNATIVE
- (H) GEOGRID, WRAPPED AROUND PERIMETER OF SYSTEM, WITH 6" TOE (OUTWARD FROM BASE) AND 12" EXCESS (OVER TOP OF DECK)
- (I) CABLE TIE, ATTACHING GEOGRID TO SILVA CELL AT BASE OF UPPER LEG FLARE, AS NEEDED
- (J) PLANTING SOIL, PER PROJECT SPECIFICATIONS, PLACED IN LIFTS AND WALK-IN COMPACTED TO 75-85% PROCTOR
- (K) COMPACTED BACKFILL, PER PROJECT SPECIFICATIONS
- (L) GEOTEXTILE FABRIC TO EDGE OF EXCAVATION
- (M) RIBBON CURB AT TREE OPENING (TO BE USED WITH PAVERS OR ASPHALT)
- (N) THICKENED EDGE AT TREE OPENING (TO BE USED WITH CONCRETE)
- (O) PAVEMENT AND AGGREGATE BASE PER PROJECT *
- (P) DEEPROOT ROOT BARRIER, 12" OR 18", DEPTH DETERMINED BY THICKNESS OF PAVEMENT SECTION, INSTALL DIRECTLY ADJACENT TO CONCRETE EDGE RESTRAINT
- (Q) PLANTING SOIL BELOW ROOT BALL, COMPACTED WELL TO PREVENT SETTLING
- (R) ROOT BALL
- (S) TREE OPENING TREATMENT, PER PROJECT SPECIFICATIONS
- (T) DEEPROOT WATER AND AIR VENT, ROOTBALL, WHEN REQUIRED
- (U) DEEPROOT WATER AND AIR VENT, WHEN REQUIRED
- (V) UNDERDRAIN SYSTEM, WHEN REQUIRED (LOCATION AND DETAILS BY OTHERS)

*MINIMUM PAVEMENT PROFILE OPTIONS TO MEET H-20 LOADING

PAVEMENT	+ AGGREGATE BASE COURSE
4" CONCRETE	+ 4" AGGREGATE
3" PAVER	+ 12" AGGREGATE
4" ASPHALT	+ 12" AGGREGATE
2.6" PAVER	+ 5" CONCRETE

NOTES

1. EXCAVATION SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE HEALTH AND SAFETY REGULATIONS
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
3. PROVIDE SUPPLEMENTAL IRRIGATION
4. DO NOT SCALE DRAWINGS

① **Biobarrier® : Drain Line Application**
Scale : N.T.S.

NOTES:

Note 1: Contact your utility company prior to trenching. Consult a professional arborist if root trimming is required.
Note 2: Install & Cover Biobarrier® as soon as possible (within 12 hours) after opening. High temperatures and direct sunlight can reduce effective product life.
Note 3: Dig trenches a minimum of 4 in. wide for Typar® Biobarrier® Root Control Fabric. Trenches must be a minimum length of mature plant canopy plus(+) 10' (i.e., centered on the root access and adjacent to protection area.
Note 4: Install Typar® Biobarrier® Root Control Fabric with the root barrier facing toward root source.
Note 5: Install Typar® Biobarrier® Root Control Fabric on the side of the trench opposite the root source.
Note 6: Install Typar® Biobarrier® Root Control Fabric with flaps facing toward root source.
Note 7: Piping pins should penetrate fabric between the modules 1/4 in. from top edge of fabric and at a 45 ° angle to the trench wall.

Specific advice on the use of Biobarrier® can be obtained from Polymer Group Inc.

Table 1 : Biobarrier® Specifications

Description	Data	
Product Chemical Family	Biobarrier® Root Control System Thermoplastic Polyolefin	
Composition	Polypropylene	> 74.8%
	UV Stabilizer	< 1%
	Trifluralin	< 20%
	Pigment Masterbatch[1]	< 0.5%
Appearance	Gray Fabric	
Physical State	Solid	
Vapor Pressure[2]	13.7 mPa @ 25°C	
Boiling Point	Not Applicable	
Solubility (H2O)[2]	0.2 ppm @ 25°C	
Vapor Density	not Applicable	
Packing Density	not Applicable	
Odor	Aromatic (Solvent)	
pH	not Applicable	
Decomposition Rate	not Applicable	
Melting Point[2]	> 46.8°C	
Specific Gravity	0.90-0.99	
Percent Volatiles	nil	
UV radiations	High	
Combustibility	none	
Flammability	Non-Flammable	
Toxicity	None	
Biodegradability	None	
Explosivity	None	
Fabric		
Unit Weight	4.0	
Tensile Strength (lbs.)	45.0	
Elongation at Break (%)	> 70.0	
Mullen Burst Strength (psi)	175.0	
Puncture Strength (lbs.)	51.0	
Coefficient of Permeability (cm/sec.)	2 x 10[-2]	
Nodule		
Base Diameter (in.)	7/16	
Height	1/4	
Weight (oz.)	0.013	
Spacing (in.)	1-1/2	

[1]Contains Carbon Black : < 0.1%
[2]Trifluralin (CAS # 1582-09-8)
*Additional information May Be Obtained From Polymer Group Inc. Upon Request

Chart 1: Examples of Intended Biobarrier® Root Control Applications & Roll Widths

Application	Root Control Width in. (cm)					
	12 (30)	19.8 (50)	24 (61)	33 (74)	39 (99)	66.8 (140)
Building Foundations				X	X	X
Burial Vaults/Tombstones						X
Containers			X	X	X	X
Curbs		X	X			
Drain Lines	X	X	X	X	X	X
Earthquake						X
Golf Greens/Tees/Cart Paths		X	X	X	X	X
Landfills						X
Manholes			X	X	X	
Paths	X	X	X	X		
Planting Beds		X	X	X	X	X
Pot 'N' Pot	SOLD IN 6" X 12" BWATCH-ES (BSSWCH)					
Pools	X	X		X	X	X
Retaining Walls				X	X	X
Roads		X	X	X		
Roof Gardens					X	X
Septic Tanks/Fields						X
Sidewalks		X	X	X		
Swimming Pools		X	X	X	X	
Tennis Courts		X	X	X	X	
Underground Pipes/Cables	X	X	X	X	X	X
Underground Storage Tanks						X
Utility Substations		X	X	X	X	

Biobarrier® Root Control is available in 39 ft. (5.1 m) or 100 ft. (30.5m) Roll Lengths

Chart 1 is a general guide only. Your specific applications may require slightly different sizes. As a general rule, the greater the fabric width, the greater the degree of protection against costly root damage. But, like any other root barrier the protection does not extend beyond the edge of the fabric. So it's important to use adequate length and width to assure proper protection.

This field guide is provided as an aid to assessing root control in commonly encountered site conditions. Polymer Group Inc. accepts no responsibility for any loss or damage resulting from the use of this guide.

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Biobarrier® Root Control Fabric
For Drain Line Applications
Specification, Design & Installation Guide

AAC
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SILVA CELL SYSTEM 2X

NOT TO SCALE
INCHES

pompano beach
Florida's Warmest Welcome

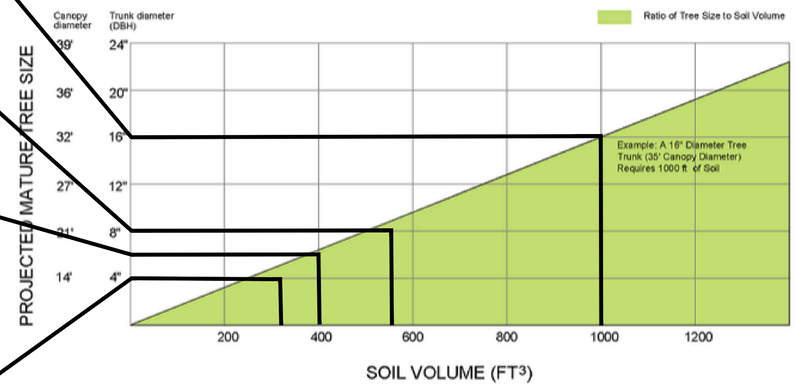
Required Tree to Soil Volume Ratio Graph

LARGE SHADE TREES (1,000 C.F. SOIL VOLUME)
- Gumbo Limbo
- Live Oak
- Wild Tamarind
- Green Buttonwood

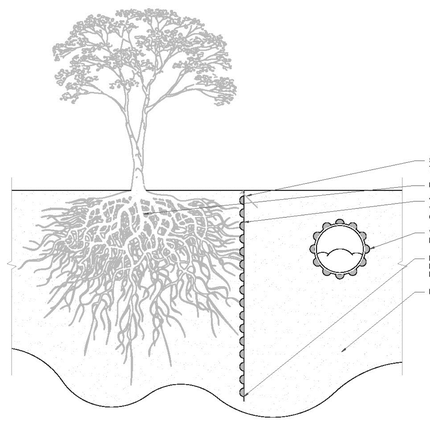
MEDIUM SHADE TREES (500 C.F. SOIL VOLUME)
- Satin Leaf

SMALL TREES/LARGE PALMS (400 C.F. SOIL VOLUME)
- Montgomery Palm (Double)
- Ribbon Fan Palm
- Sabal Palm
- Silver Buttonwood
- Simpson Stopper

SMALL PALMS (300 C.F. SOIL VOLUME)
- Florida Thatch Palm



Soil volumes depicted in this chart are based on the amount of roots loam soil can support with optimum compaction for root growth.



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Vapor Density	Not Applicable	
Packing Density	Not Applicable	
Odor	Aromatic (Solvent)	
pH	Not Applicable	
Decomposition Rate	Not Applicable	
Melting Point[2]	> 46.8°C	
Specific Gravity	0.90-0.99	
Percent Volatiles	Nil	
UV radiations	High	
Combustibility	None	
Flammability	Non-Flammable	
Toxicity	"V"	
Biodegradability	None	
Explosivity	None	
Fabric		
Unit Weight	4.0	
Tensile Strength (lbs.)	45.0	
Elongation at Break (%)	> 70.0	
Mullen Burst Strength (psi)	175.0	
Puncture Strength (lbs.)	51.0	
Coefficient of Permeability (cm/sec.)	2 x 10[-2]	
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Curbs		X	X			
Drain Lines	X	X	X	X	X	X
Earthquake						X
Golf Greens/Tees/Cart Paths		X	X	X	X	X
Landfills						X
Manholes			X	X	X	
Paths	X	X	X	X		
Planting Beds		X	X	X	X	X
Pot 'N' Pot	SOLD IN 6" X 12" BWATCHES (BSSWCH)					
Pools	X	X				
Retaining Walls				X	X	X
Roads		X	X	X		
Roof Gardens					X	X
Septic Tanks/Fields						X
Sidewalks		X	X	X		
Swimming Pools		X	X	X	X	
Tennis Courts		X	X	X	X	
Underground Pipes/Cables	X	X	X	X	X	X
Underground Storage Tanks						X
Utility Substations		X	X	X	X	

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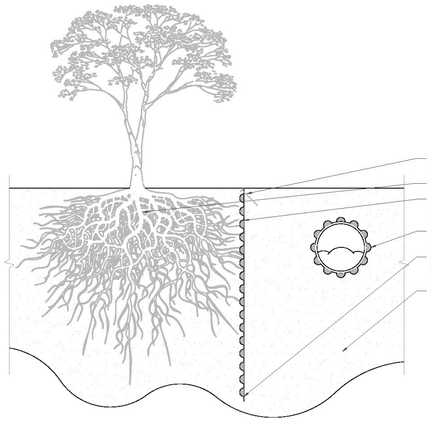
Biobarrier® Root Control Fabric
For Utility & Pipe Applications
Specification, Design & Installation Guide



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REGISTERED LANDSCAPE ARCHITECT KEN GARDNER LA 6001669 STATE OF FLORIDA

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KEN GARDNER
FL LA 1569

TO THE BEST OF MY KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM REQUIREMENTS OF THE FLORIDA BUILDING CODE AND FIRE SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND 633 FLORIDA STATUTES

Digitally signed by Ken Gardner
Date: 2026.04.16 11:17:01 -04'00'

Professionals

idea Architect

FLYNN ENGINEERING

GSLA DESIGN

REV.	DATE	DESCRIPTION
01	XX-XX-2024	D.R.C SUBMITAL

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Key section

Client

VERA FUND
NICK POLYUSHKIN
& YURI KHARITONENKOV
TEL: 305.833.3303

Project

1600 S FEDERAL HIGHWAY (MIXED-USE PROJECT)

1600 SOUTH FEDERAL HIGHWAY, POMPANO BEACH, FL 33062

Title

SOIL VOLUME DATA & DETAILS

Drawn	Field
GSLA	LANDSCAPE ARCH
Verified	Scale
KG	as shown
Approved	Date
KG	10-09-2024
Project Manager	Dwg. no.
KG	L-208b
Project	
24-838	