TRUEGRID®

True to your project. True to the environment.

CATALOG 2021

World's Strongest Permeable Pavers

TRUEGRIDPAVER.COM.AU

1 300 796 018

US Patent #8,734,049 | US and Foreign Patents Pending

DRIVEN BY PURPOSE...

We have a clarity of purpose for our business: to challenge conventional thinking and disrupt traditional paving methods; to ultimately create a better, cleaner, less toxic environment for our kids.

By offering a simple new green technology that is easily actionable, together we can make an impact now. Less flooding. Cleaner air and water. Less heat. Less thermal pollution. Less waste in the landfill. Fewer toxins from runoff pollutants as well coal tar & asphalt. A more natural landscape.

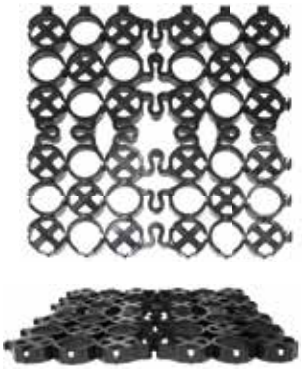
PRO LITE

The Residential Paver

PRO PLUS®

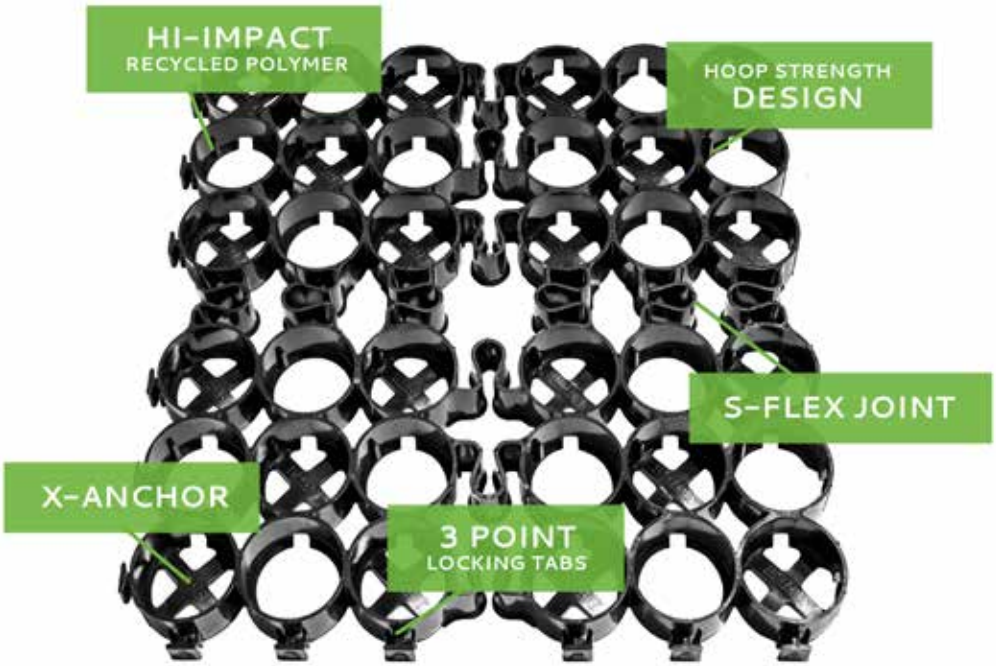
The Commercial Paver

ROOT™



The Grass Paver

DESIGN FEATURES



U.S. Patent No. 8,734,049

The robust cells allow our 1 kg grid to handle over 1 million kgs per sq metre load! No gravel migration, compaction or dust. **100% permeability.** The grid can be pressed together by hand, no tools, no clips. With the integral X-anchors, no staking is needed. A bottom flange prevents sinking. Other systems are either too flexible & weak & can't handle trucks or traffic; or too rigid because soils move and paving cracks! The S-Flex Joints solve these problems giving our grid the best of both. A versatile design for any climate or soil or weight or traffic load.

INDEX

GRAVEL FILL

GRASS FILL

INTRODUCTION TO THE TRUEGRID SYSTEM

In urban watersheds, almost all of the impervious surface area is represented by building rooftops and paved surfaces. In residential areas most of the paved area is represented by the roadway system and residential driveways. Parking lots and paved industrial storage areas represent an even larger portion of the impervious surface in commercial and industrial areas. Impervious pavements can produce two-thirds of the excess runoff in an urban catchment. Runoff from impervious pavements contributes a substantial loading of hydrocarbons and heavy metal pollutants, and contributes greatly to the increased temperature of surface runoff. In most urban jurisdictions, a paved roadway system with a traditional curb and gutter configuration provides a key component of the overall urban drainage system. Surface flow from adjoining tributary watersheds is conveyed directly into catch basin inlets and connected piping systems. In these traditional impervious paved systems, the runoff coefficient (runoff volume) is increased and the time of concentration is decreased resulting in increased peak rates of runoff. TRUEGRID provides a highly permeable stabilized surfaces that can be used for the movement and parking of vehicles (automobiles, trucks, construction equipment, aircraft, etc.) and storage of materials and equipment.

Drive on the surface, drain & detain stormwater below.

Compared to conventional pavement, the TRUEGRID system is designed to infiltrate storm water runoff instead of shedding it off the surface. TRUEGRID will reduce the amount of runoff by allowing water to pass through surfaces that would otherwise be impervious. The storm water passes through the load bearing surface and aggregate sub base that are selected based upon the intended application and required infiltration rate. Runoff is stored in the stone aggregate sub base course / storage layer, and allowed to infiltrate into the surrounding soil (functioning like an infiltration basin).

A TRUEGRID surface has very high initial surface infiltration rates and can immediately infiltrate and store rainfall and runoff from high intensity rainstorms. In many cases, direct runoff is completely eliminated. The surface infiltration rates for TRUEGRID will in most cases exceed 20,320 mm/hour.

Compared to conventional pavement, the TRUEGRID system is designed to infiltrate storm water runoff instead of shedding it off the surface. TRUEGRID will reduce the amount of runoff by allowing water to pass through surfaces that would otherwise be impervious. The storm water passes through the load bearing surface and aggregate sub base that are selected based upon the intended application and required infiltration rate. Runoff is stored in the stone aggregate sub base course / storage layer, and allowed to infiltrate into the surrounding soil (functioning like an infiltration basin).

SUB-BASE CONSIDERATIONS
FOR STORM WATER DETENTION

Crushed aggregate meeting ASTM No. 57 is commonly used for open-graded sub bases along with ASTM No. 2 to No. 4. These materials are widely available and they are recommended for most TRUEGRID Permeable Paver applications. These materials will have a nominal porosity (volume of voids/total volume of base) over 0.32 and a storage capacity in the void space (volume of voids/volume of aggregate) approaching 40%. A 40% void space provides 0.4 cubic feet of storage capacity for each cubic foot of aggregate (the volume of the base will need to be 2.5 times the volume of water to be stored).

Sub-Base for Grass Infill Installations. Should be a 19mm minus, sandy gravel road base. Although reducing the stormwater storage capacity to around 20%, this base will grow grass, support heavy loads, and drain.

CHART A: PERMEABLE BASE
AASHTO #57 PERMEABLE SUB-BASE MATERIAL DEFINED AS:

SIEVE SIZE		PERCENT PASSING	
MM	IN	#57	TYPICAL
37.5	1½	100	100
25	1	95 - 100	97
19	¾		75
12.5	½	26 - 60	45
9.5	⅜		25
4.75	#4	0 - 10	5
2.36	#8	0 - 5	2

ENDLESS GRAVEL FILL OPTIONS

THE VALUE TO THE TRUEGRID SYSTEM

Runoff volume reduction/elimination is achieved when TRUEGRID is placed over in situ soils and a defined volume of the water passing through the pavement is infiltrated into the angular stone base and soil subgrade below.

Peak runoff rate reduction is achieved when the volume of water passing through the TRUEGRID surface is "detained" for a defined period of time within the pavement cross-section and the open graded aggregate sub base beneath the pavement. The effective infiltration rate for the watershed is increased by trapping the water in the permeable surfaces and effectively increasing the time of concentration in the catchment area.

Pollutant removal. Infiltration of storm water runoff through the pavement surface will provide a degree of suspended solids removal followed by additional removal of colloidal solids and soluble pollutants in the aggregate sub base and sub soils. Sorption of metals to colloidal solids and within the pavement void matrix is another removal function. Soluble organic pollutants adsorbed within the pavement void matrix and the open graded aggregate sub base will be exposed to biodegradation over time.

TYPICAL POLLUTANT REMOVAL (%)

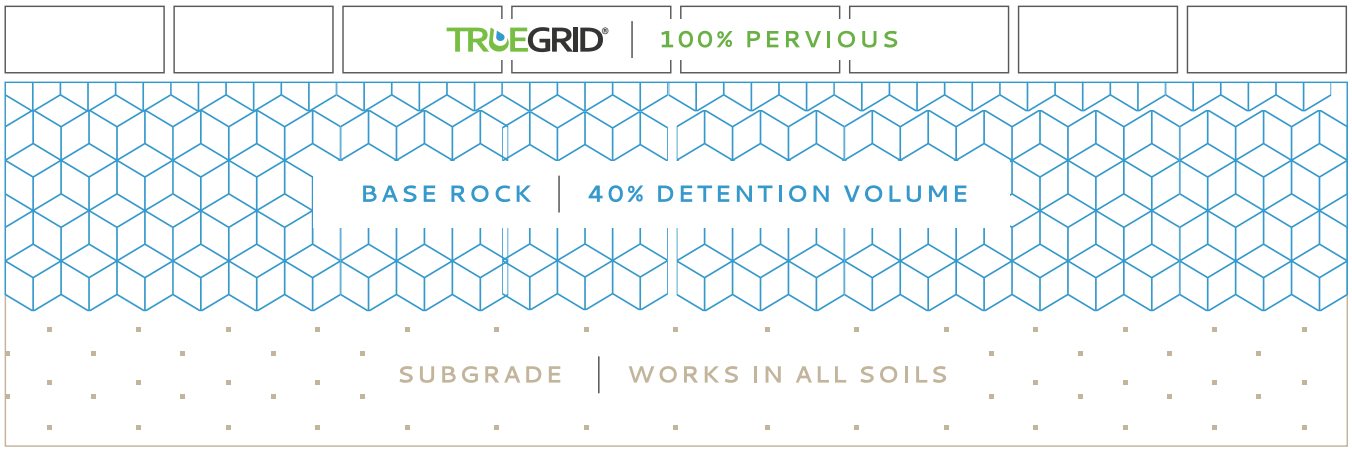
BMP TYPE	SUSPENDED SOLIDS	NITROGEN	PHOSPHOROUS	PATHOGENS	METALS
TRUEGRID	65 - 100	65 - 100	30 - 65	65 - 100	65 - 100
Dry Retention Basins	30 - 65	15 - 45	15 - 45	< 30	15 - 45
Retention Basins	50 - 80	30 - 65	30 - 65	< 30	50 - 80
Constructed Wetlands	50 - 80	< 30	15 - 45	< 30	50 - 80
Infiltration Basins	50 - 80	50 - 80	50 - 80	65 - 100	50 - 80
Infiltration Trenches / Dry Wells	50 - 80	50 - 80	15 - 45	65 - 100	50 - 80
Grassed Swales	30 - 65	15 - 45	15 - 45	< 30	15 - 45
Vegetated Filter Strips	50 - 80	50 - 80	50 - 80	< 30	30 - 65
Surface Sand Filters	50 - 80	< 30	50 - 80	< 30	50 - 80

Reduces Heat Island Effect. Heat Island Effect occurs in areas such as a city and industrial sites that have consistently higher temperatures than surrounding areas because of greater retention of heat. This retention of heat is due to buildings, concrete, and asphalt. Using TRUEGRID in these "hot spot" areas for pathways, parking lots, driveways, roofs…etc., reduces the absorbability of solar rays and thus helps steady and cool the natural environment.

High load bearing capacity. TRUEGRID is designed with the highest load capacities of any grid system and can withstand significant structural loads. TRUEGRID provides a stable and continuous load-bearing surface throughout parking areas.

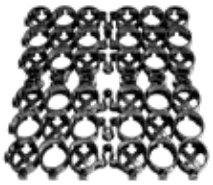
COMPETITION COMPARISON

SPECIFICATION	TRUEGRID	ROLL-OUT PLASTIC PAVERS	CONCRETE PAVERS
Strength (filled)	9510 psi	5730 psi	5000
Flexural Strength	High	None (rolled paver)	High
Weight (kg/m2) Tensile	6.44	2.05	180.65
Strength	1294 kgs	208lbs	NA
Fill rock size	Up to 25 mm	Up to 9.5 mm	NA
Staking	**Not Required**	Required	NA
Installation	100 sq mt/hr	NA	Slow
Recycled content	100% post consumer	100%	0
Porosity	90%	90%	37%
Wall thickness	**6.4 mm**	2.6 mm	NA
Paver depth	45.7 mm	25.4 mm	50 mm
Cell Size (ID)	81.3 mm	54.6 mm	NA
Flexibility	Rigid w/ Flex joints	Flexible	Rigid
Adjoining cell walls	**Yes**	No	No
Flex joints	**Yes**	No	No
Joint type	Tab	Snap	None
Shear Transfer Strength	High	Low	None



GREEN

TRUEGRID Permeable Pavers are designed to provide design professionals with an eco-friendly alternative to concrete and asphalt and other impervious surfaces. Similar systems have been used in Europe for over 40 years and have been highly effective and accepted as a better alternative to impervious surfaces. TRUEGRID improved upon this concept and developed a stronger, more durable, USA made version that can handle any load and rigors concrete can handle....while being 100% permeable.



Made from 100% post-consumer recycled HDPE.

100% Permeable. Up to 100% of runoff water pollutants are removed via bioremediation.

Impact Scorecard

MEASURE THE DIFFERENCE

14,000 SQ MT
600 Car Lot

CO2 SAVED

877 TONNES

PLASTIC RECYCLED

92,000 KG

STORMWATER DETAINED

1,133 m3

LEED Credit Opportunities With TRUEGRID

STORMWATER MANAGEMENT

RECYCLED CONTENT

INNOVATION & DESIGN

MATERIALS & RESOURCES

Tons of CO2 emissions from the manufacturing of cement are eliminated. Millions of lbs of plastic are kept out of landfill and recycled from a consumable to a 60 year life cycle useful product. Detention is added and flooding from stormwater is reduced. Coal tar & asphalt toxins are eliminated.

TRUEGRID has kept more than **544,000 KG** of plastic out of landfills ...so far

PRODUCTS

TRUEGRID® PRO LITE

THE RESIDENTIAL PAVER

601 mm

25.4 mm

- Superior Patented Design
- Excellent Compression Strength. Best-in-class.
- Low traffic applications
- H20, HS20 Rated

SUPERSPOT® AVAILABLE

SPECIFICATIONS:

· Dimensions:	601 mm x 601 mm x 25.4 mm (40.36 m^2)
· Pre-Assembled:	1.44 m^2 sheet of 4 grids
· Compression Strength:	6200 psi filled.
· Permeability:	100%
· Material:	100% Post-Consumer Recycled HDPE
· Color:	Black with UV Stabilizer (Other Colors Available)

MORE:

- No Staking or Clips
- Works in All Climates & Soils
- May be Saw Cut
- Grass or Gravel Fill
- High Heel Friendly

APPLICATIONS:

- Driveways
- Parking lots
- Event Parking
- Firelanes
- Grass Overflow Parking
- Community Green-Space
- Golf Cart Paths
- Walk/Bike Trails
- Pathways

ADA COMPLIANT

PRODUCTS

TRUEGRID® PRO PLUS

THE COMMERCIAL PAVER

601mm

47.7mm

· Works with SuperSpot® Parking Markers
· Superior Patented Design
· Engineered for Heavy Loads & Heavy Traffic
· Industry-Best Strength.
· Industrial or Commercial Applications
· Rated 20 Tonne per axle

SUPERSPOT® AVAILABLE

SPECIFICATIONS:

· Dimensions:	601x 601 x 45.7 (0.36 m^2)
· Pre-Assembled:	1.44 m^2 sheet of 4 grids
· Compression Strength:	9510 psi filled.
· Permeability:	100%
· Material:	100% Post-Consumer Recycled HDPE
· Color:	Black with UV Stabilizer

MORE:

· No Staking or Clips
· Works in All Climates & Soils
· May be Saw Cut

COMMERCIAL APPLICATIONS:

· Parking Lots Equipment & Truck Yards
· Storage Yards
· Construction Sites
· Event Parking
· Emergency Access for Easments
· Distribution entres

ADA COMPLIANT





SuperSpot® for TRUEGRID PRO PLUS

- Maintenance-Free Parking Markers
- Delineate Parking for Max Efficiency
- Create Arrows & Traffic Flow Markers
- High Visibility Profile
- Heavy Loads, Heavy Traffic
- Easy Snap-Lock Installation
- Never Stripe Again

SPECIFICATIONS:

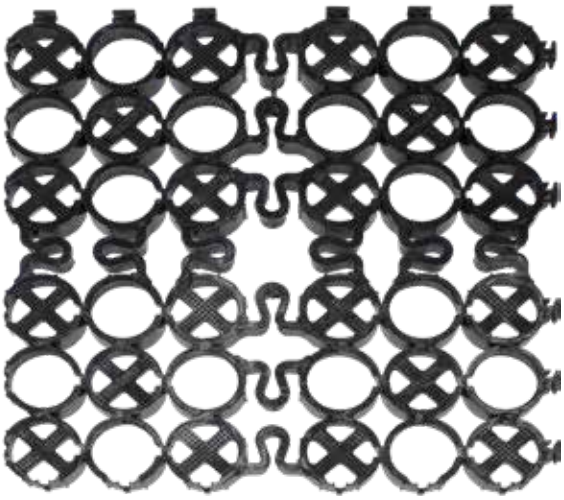
- Support Ribs for Strength
- 22.86 mm Domed Profile
- UV Stabilized

PRODUCTS

TRUEGRID® ROOT™ NEW PRODUCT

THE GRASS PAVER

601 mm



25.4 mm

· Advanced Patented Design
· Protects Grass from Rutting
· Fast, Easy Installation
· Usually Costs Less than Asphalt

SPECIFICATIONS:

· Dimensions:	601 mm x 601 mm x 25.4 mm (40.36 m2)
· Pre-Assembled:	1.44 m2 sheet of 4 grids
· Strength:	Holds up to 4,536 kg GVW
· Permeability:	100%
· Material:	100% Post-Consumer Recycled HDPE
· Color:	Black with UV Stabilizer (Other Colors Available)

MORE:

· Only Available Immediate Heavy Load Grass System
· Stabilized Grass Drains. No Runoff.
· 100% Recycled Plastic
· Little or No Maintenance
· 60-Year Lifespan

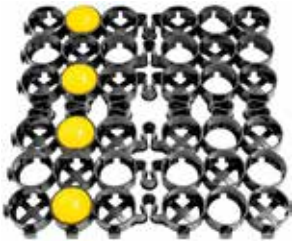
APPLICATIONS:

· Grass Parking for Cars & Trucks
· Festival Site Protection
· Light Aircraft Runways & Taxiways
· Event Centers
· Paths & Trails
· Slope & Scour Protection
· RV & Boat Storage & Access
· Fairground Turf Support

ADA COMPLIANT

ACCESSORIES

SUPERSPOTS®



MAINTENANCE-FREE PARKING DELINEATORS

Delineate your parking spots with easy-to-pop-in SuperSpot parking markers. No-restriping. Long-term UV resistance. Multiple color options for standard parking, fire lanes, handicapped designated spaces. Highly visible.

PRO PLUS




PRO LITE



The Plate™

EASY-TO-USE PARKING SPOT IDENTIFIER FOR PRO PLUS

Identify your spaces with easy-to-pop-in PLATE markers. Long-term UV resistance. Multiple color options for standard signs. Highly visible. *Patent Pending*

7.5"

ARCHITECTS

"Man is a phase of nature, and only as he is related to nature does he matter, does he have any account whatever above the dust."

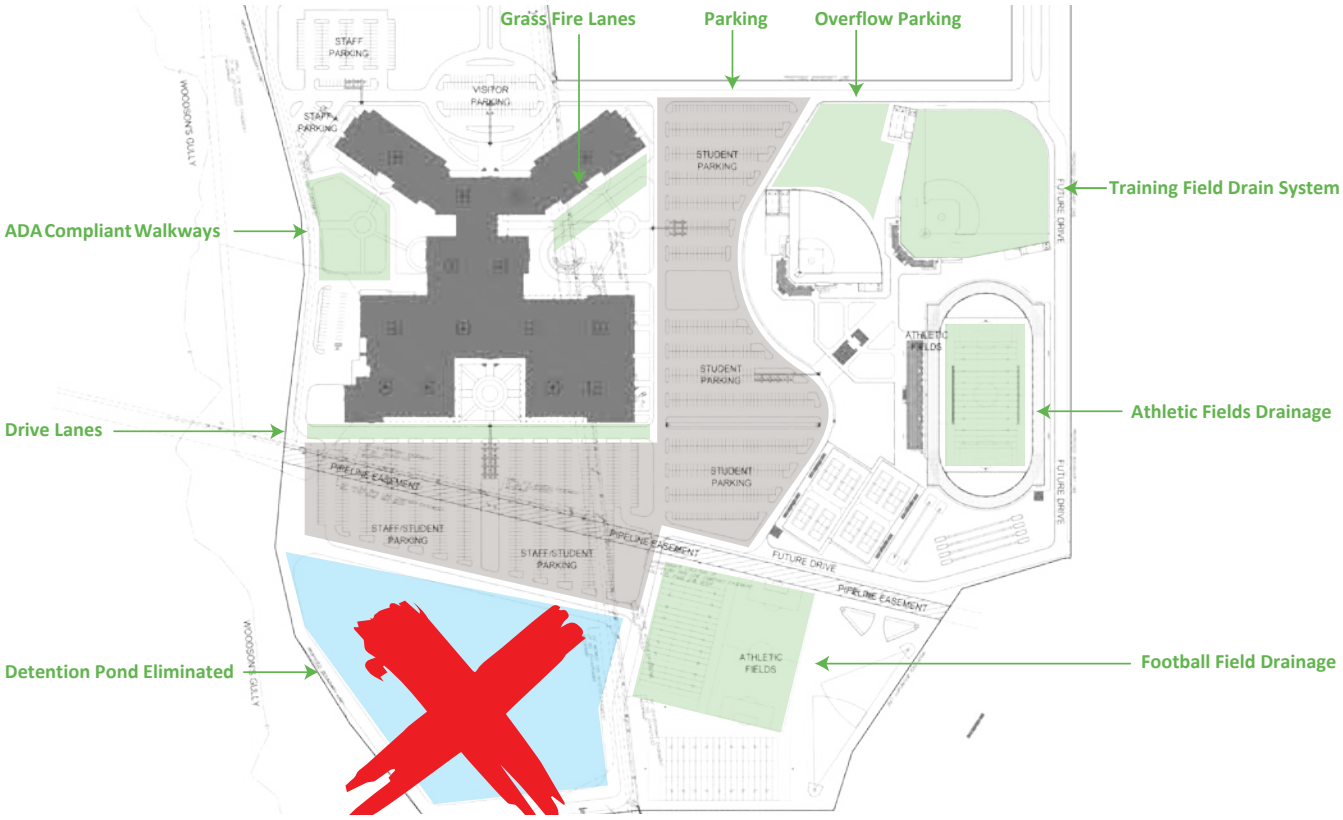
Frank Lloyd Wright

Endless Gravel Fill Options:

- Beauty
- Performance
- Sustainability

Achieve harmony & balance development with nature. Gain space for inspired functionality & green, creative livability. Retain & reuse stormwater onsite. Natural, upscale aesthetic. ADA compliance. Design with TRUEGRID.

DEVELOPERS



- 100% Land Utilization
- Durable & Pervious Cover
- Dollars

Save land & eliminate or reduce detention ponds. Drive on surface with detention under your parking lot. Maintenance-free 25 to 60 year life. Heavy traffic, heavy loads. TRUEGRID counts as 100% pervious cover. Construction costs up to 30% less than concrete. Sustainable, upscale natural aesthetic. Build with TRUEGRID.

"Buy land, they're not making it anymore."

Mark Twain

ENGINEERS

" Some people don't like change, but you need to embrace change if the alternative is disaster."

Elon Musk

-Detention
-Durability
-Dollars

Control flooding and manage stormwater. Best-in-class, engineered strength, structure & soil stabilization with TRUEGRID. Heavy traffic, heavy loads. H20, HS20 rated. 25+ year life. Save on construction costs (up to 50%) and land. Specify TRUEGRID.

CITY WSUD OPTIONS

- Stormwater Management
- Urban Heat Island (UHI) Reduction
- Functional Green-Space

Reduce flooding and manage stormwater with TRUEGRID. Added detention volume. 100% pervious cover. Improved water quality & more parking. Cooler than asphalt or concrete. No gravel migration. Key tool throughout the USA in federal (EPA), state, county and city LID (Low Impact Development) guidelines and BMPs. Code with TRUEGRID.

1. Stormwater Detention Underneath

UNDERPASS PROJECT

2. Drive on Durable Surface

CONTRACTORS

- Advantageous Price & Service Differentiator
- Eco-Friendly Offering
- Easy-to-Install

Gain a cost and speed advantage over conventional paving. Differentiate from competitors as a preferred TRUEGRID installer with a green, pervious, coded, less expensive paving system. Pave with TRUEGRID.

1. Grade the site

2. Lay, compact base

3. Drop the grid

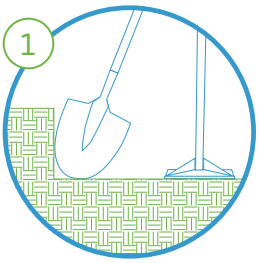
4. Fill the grid

HORSE, LIVESTOCK, & FARM

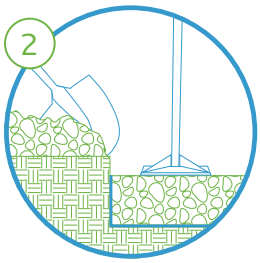
- Stops Mud in Paddocks. Maintenance-Free.
- Thrush-Free Healthy Hooves.
- No Standing Water. Drains Instantly.

TRUEGRID PRO PLUS® for Equine, Farm, & Livestock use offers an advanced patented design. Strong for heavy loads. Clydesdales to John Deere. Patented S-flex joints allow “crowning” of paddock surface for instant water draining. Stops digging. No ruts, mud or dust. Drains instantly. No standing water. Keeps area level or crowned as desired. Urine drains, reducing odor. Keeps bedding dry. No bacteria buildup. Supports heavy equipment loads & traffic.

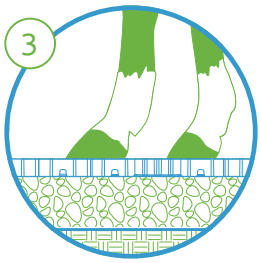
1. Scrape back, level, compact the area.



2. Lay filter fabric and ¾" minus base rock.



3. Lay PRO PLUS grid. Fill with soil.

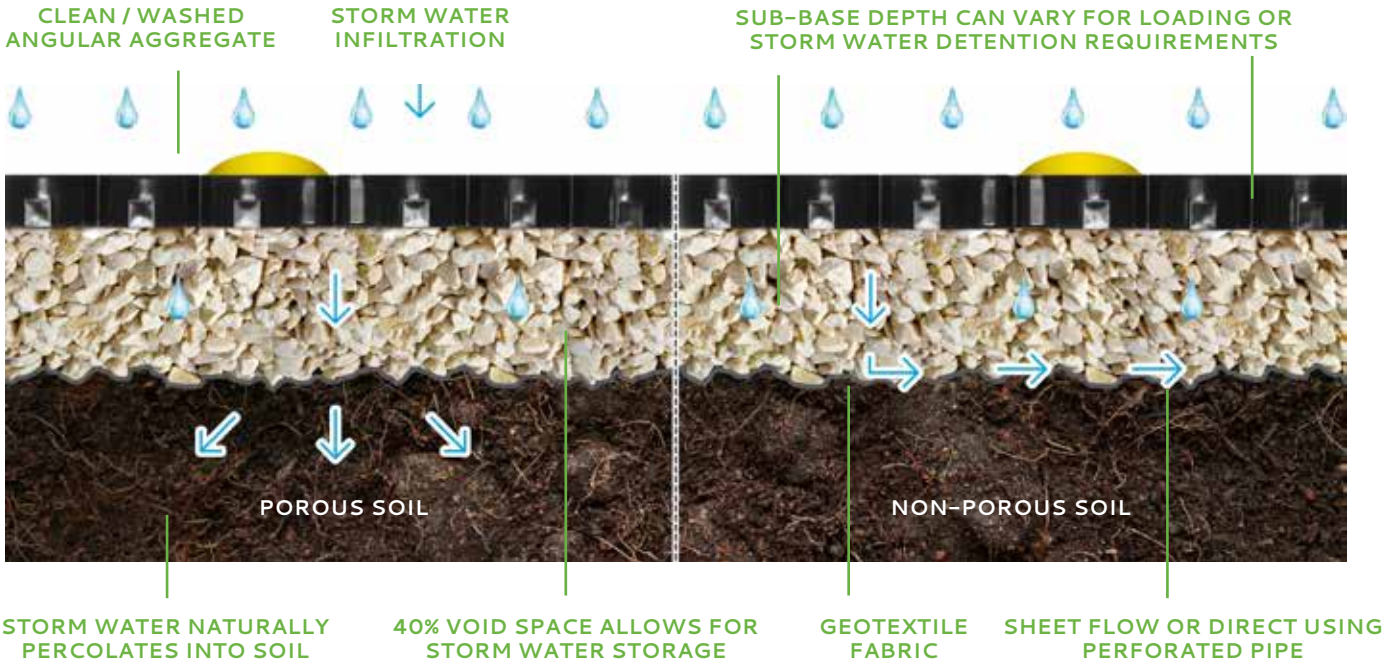


WORKS IN ALL CLIMATES AND SOILS
STORM WATER DETENTION

100% PERVIOUS COVER

20+ METRES/HOUR INFILTRATION RATE

0.0 – 0.05 RUNOFF COEFFICIENT



HOW TO CALCULATE STORM WATER DETENTION CAPACITY

Detention Capacity = TRUEGRID Area (A) x Total Aggregate Depth (d) x 40% Void Space = A x d x 0.40

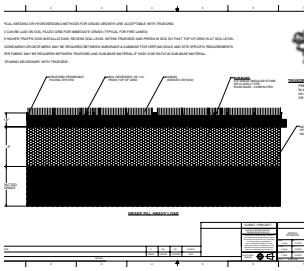
WHERE:
d = Depth of Sub-base + TRUEGRID Height

EXAMPLE:
1 Acre Lot, TRUEGRID PRO PLUS, 200 mm Sub Base
Fill & Sub Base - 3/4" Clean/Washed Angular Stone
Detention Capacity = A x d x 0.40

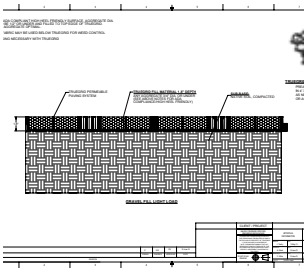
WHERE:
A = 1 Acre = 2000 m2
d = 200 mm + 45.7 mm = 0.246 mt
Detention Capacity = 2000 x 0.2457 x 0.4 = 197 m3

Go to TECHNICAL INFO on TRUEGRIDpaver.com.au for typicals. Call for site specific questions: 1 300 796 018

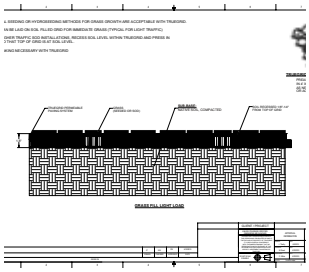
1. Grass Fill Heavy Load



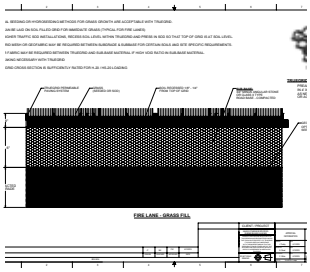
2. Gravel Fill Light Load



3. Grass Fill Light Load



4. Fire Lane



PROJECTS

SUPERBOWL LI® – CLUB NOMADIC®

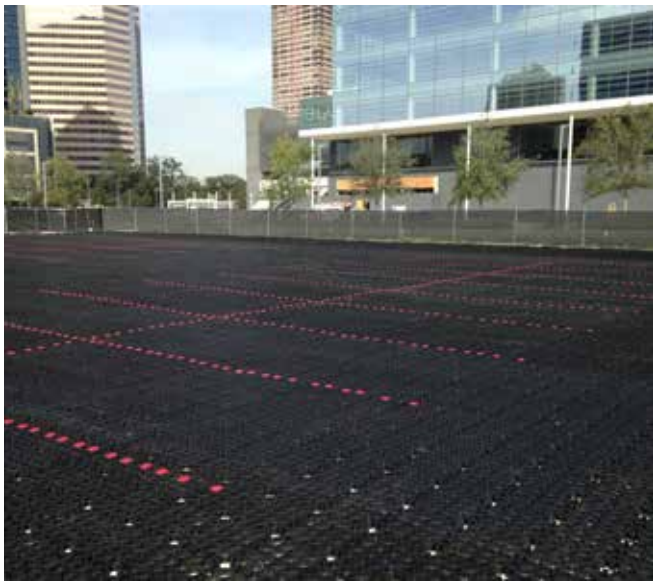
POP-UP NIGHT CLUB

- **5,600 sq mt** Parking Lot Installed in 10 Days
- 3-Story Metal Nightclub Installed in 60 Days
- 100% Land Use - TRUEGRID Lot Eliminated Detention Pond

Whole Foods Market®

"Great product. Went in quick. Our ADA compliant lot was down in time for the holidays."

John Fox (Construction Supervisor)



PROJECTS

Google®

FACT

TRUEGRID was tested and chosen over all other paving options by site engineers for Google at the Mountain View campus. Eco-friendly, durable and 100% permeable.

Pocono Raceway®—NASCAR®

"The new installed walkways were a huge success with our fans. The ease of installation and maintenance… we intend to once again use TRUEGRID Pavers throughout. It's a great product and fits in with our sustainability efforts."

Brandon Igdalsky – CEO

PROJECTS

Fire Lane

"We've completed all the tests. As far as supporting the truck as a driving material, we didn't have any issues there. When we set the outriggers up, in a normal operation with the pads underneath the outrigger, we were able to take the truck to its extreme test with all the weight all on one side. So that test was a success. We then took the outriggers without the pads and to increase the concentrated load on the system. It even supported those."

Fire Chief McCaskill

Self-Storage

"We got pervious cover credit for our entire lot and eliminated the entire 2.5 acre detention pond."

Hank Daughtry - New Braunfels Self Storage

PROJECTS

U.S. Military

"They spec TRUEGRID because of the its eco-friendliness as well as strength to handle anything."

Chris Smith- Gilmore Environmental Consulting

Industrial

"Our trucks and equipment don't get stuck anymore when it rains. The grid keeps us working."

David Bourgeois – (Purchasing Manager) Petrochem

PROJECTS

ROCKSTAR Energy Bike Park

The North Houston ROCKSTAR Energy Bike Park is the Largest BMX bike park in North America. 150K sf of PRO PLUS were spec'd and installed for 100% pervious cover, stormwater detention and the natural aesthetic that compliments the park.

NOCI Sonoma Edible Garden

TRUEGRID works in harmony with nature on a beautiful California site to blend seamlessly while allowing the site to meet stormwater management code requirements. TRUEGRID was used on the roadways, work areas, pathways and patios.

PROJECTS

Snowplowing - Cold Climate Use

FACT

Snow melts faster on TRUEGIRD and there is less ice buildup. TRUEGRID can be easily plowed, snow-blown or shoveled.

Wellington Aero Park

This aero club community stabilized their grass taxiways and perpendiculars to keep flying in all seasons and weather conditions. A better solution than asphalt, the grass-filled TRUEGRID looks naturally beautiful while supporting plane traffic.

TRUEGRID® CASE STUDY
PARKING LOT EXPANSION

AutoNation® car dealership increases inventory lot space while saving almost half a million dollars.

PROBLEM:

Design a solution that will allow AutoNation to expand its current car inventory lot without spending more money on land.

CHALLENGES:

High cost for concrete, detention pond and drainage system cost, maximize land utilization for space challenged dealership, stormwater detention requirements for site for flood prone areas.

SOLUTION:

100 extra spaces is a grand slam to the dealership. The entire detention pond was eliminated with the 100% pervious TRUEGRID system and by transferring all of the required stormwater detention volume into the base and the gravel filled grid. Rain infiltrates the surface at over 20 mtrs/hr and there is no runoff. SuperSpot parking markers were used instead of striping paint for maintenance free stripping.

TRUEGRID® VS. CONCRETE

- Land Savings: 2320 sq mt.
- Construction Cost Savings: $480k
- Elimination of separate detention pond
- 100% Pervious Cover Credit
- 100% Land Utilization
- Zero Stormwater Runoff
- 100 extra parking spaces gained on the 500 space lot

ESTIMATED SAVINGS USING TRUEGRID

CONSTRUCTION COSTS (m2 OVER ENTIRE SITE VS. CONCRETE)	DETENTION POND & DRAINAGE CONSTRUCTION SAVINGS	TOTAL SAVINGS
$360,000	$120,000	$480,000

TRUEGRID® CASE STUDY
WORLD'S LARGEST PERMEABLE PARKING LOT

Manheim Auto saves four acres and improves urban heat and flood drainage conditions for Texas Hobby Clients and Community.

PROBLEM:

With a concrete design 4 acres of the 15.5-acre site were needed for a detention pond which would limit car storage capacity. Design a solution that will allow for more vehicle storage, combat concrete/asphalt heat and provide stormwater drainage relief in flood-prone Houston.

CHALLENGES:

To mitigate localized flooding, stormwater management code requires on-site detention. Not only does this limit land use, the high cost for concrete, detention pond construction and drainage is high. How to maximize land utilization for on-site vehicle storage, and meet stormwater detention requirements.

SOLUTION:

All 15.5 acres are now utilized for parking by using the PRO PLUS system with Stormwater detention under the parking surface. The 4-acre pond was eliminated. Manheim Texas Hobby now holds 1,000 more vehicles than before -- a significant advantage for clients who do business at the location. And, since no runoff reduces the chance of flooding, clients' investments in their vehicles are better protected. The TRUEGRID environmentally-friendly solution leaves no runoff and filters naturally to remove harmful hydrocarbons and pollutants which protects local aquifers.

TRUEGRID® VS. CONCRETE

- Total Land Available 58065 m^2
- Total Land Utilized 58065 m2
- Land savings by eliminating detention pond: 1.62 Hectares
- 100% Pervious Cover Credit
- 100% Land Utilization
- Zero Stormwater Runoff
- 1,000 Additional Vehicles Stored On-Site
- Less absorbed and reflected solar radiation

ESTIMATED SAVINGS USING TRUEGRID

CONSTRUCTION COSTS (SQ FT OVER ENTIRE SITE VS. CONCRETE)

$754,000

DETENTION POND & DRAINAGE CONSTRUCTION SAVINGS

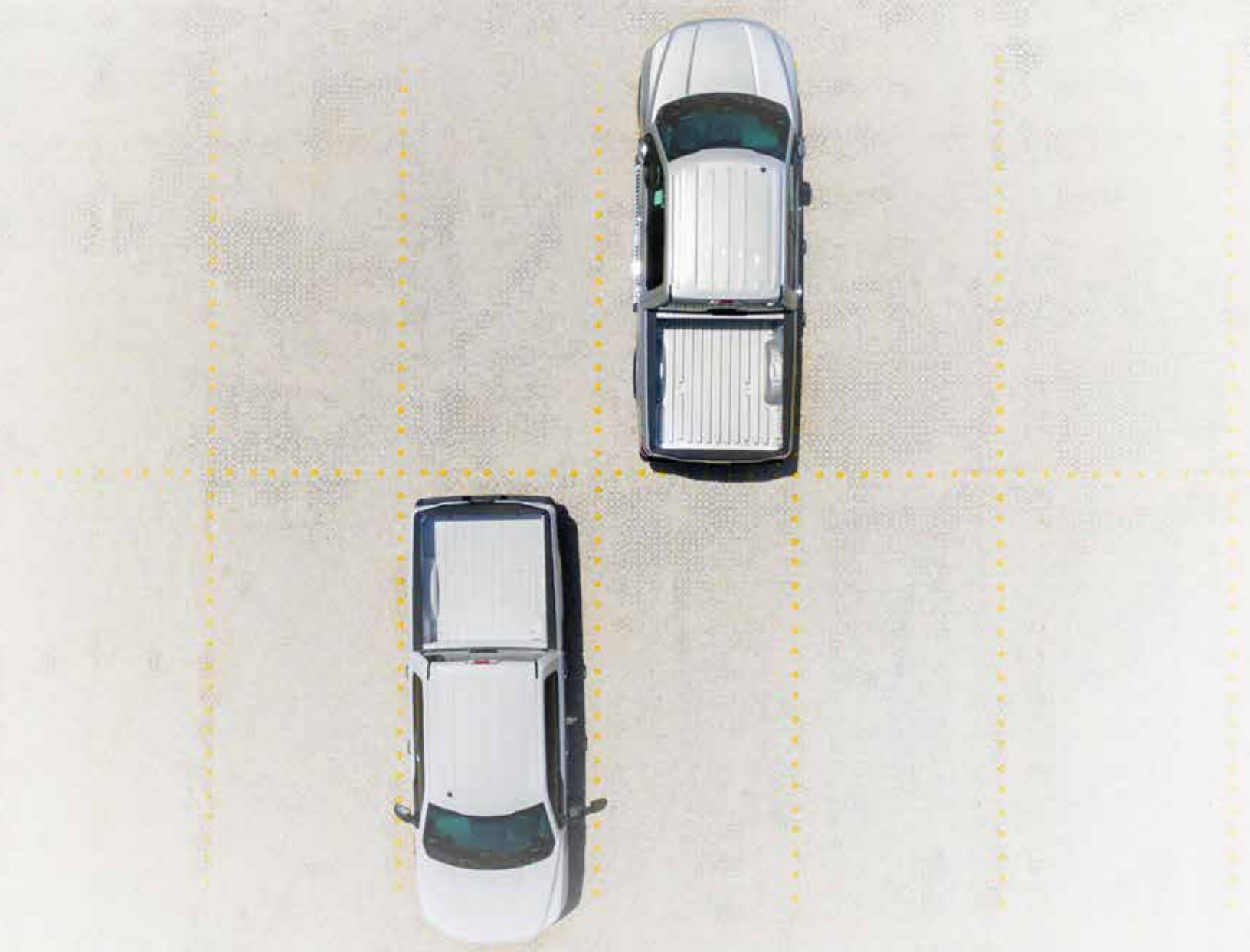
$265,000

TOTAL SAVINGS

$1,019,000

"Design is not just what it looks like and feels like. Design is how it works."

STEVE JOBS



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True to your project. True to the environment.

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