Community Development Department



Board of Adjustments (BOA) Staff Report

Board of Adjustments Hearing Date: April 13, 2023

BOA Case BA23-01: Request by Clay Cashatt represented by Caitlin Munch for a Special Exception to Section 50-112(c)(4) (*Off-street parking and loading requirements*), in the City of Tomball Code of Ordinance. Allowing the use of "TRUEGRID" as an alternative pervious paving material for required parking surfaces. The property is legally described as being Lot 4, Block 1 of Persimmon Flats. Located at 321 S. Persimmon Street, within the City of Tomball, Harris County, Texas.

Property Owner(s): Clay Cashatt

Applicant(s): Caitlin Munch

Location: 321 S. Persimmon Street (Exhibit "A")

Lot Area: Approximately 1.59 acres

Present Zoning & Use: Commercial District (Exhibit "B") / Manufacturing & warehouse

(Exhibit "C")

Comp Plan Designation: Business Park and Industrial (Exhibit "D")

Adjacent Zoning & Land Uses:

North: Commercial / Office-Warehouse

South: Commercial / HVAC Sales & Services

West: Single-Family 6/ Single-family residences

East: Light Industrial / TISD Star Academy

BACKGROUND

City Staff met with the applicant in February 2023 to discuss the conversion of the existing manufacturing/warehouse facility to a fitness center. During this meeting it was discussed that due to the change of use additional on-site parking will be required prior to the issuance of a certificate of occupancy for the desired use. Currently there are 32 existing parking spaces on site. The change of use will require an additional 10 parking spaces, bringing the site up to a total of 42 parking spaces. During this meeting concerns were expressed regarding the additional impervious surface required by this additional paved parking and specifically its effect on the existing site drainage/detention. In efforts to minimize the drainage impacts while providing the required parking spaces the applicants are requesting "TRUEGRID" permeable pavers as an alternative parking surface material. This permeable paver is designed to provides a suitable alternative to concrete or asphalt paving, while creating opportunity to properly stripe all vehicle maneuvering/parking areas to ensure adequate order and safety within parking lots while discouraging the increase of stormwater runoff that is ordinarily created with traditional concrete or asphalt paving.

ANALYSIS

The applicant is requesting a special exception from Section 50-112(c)(4) (Off-street parking and loading requirements) which states "All off-street parking, driveways, maneuvering, and loading areas shall be designed in accordance with Table 50-112-1 and Illustration 50-112-1 and shall be paved with a concrete or asphalt surface and shall be curbed, in accordance with the city's parking lot paving requirements. All such areas shall be drained to prevent damage to abutting properties and/or public streets and alleys". According to information provided by the applicant (Exhibit "F") "TRUEGRID" is a permeable paver designed to provide a suitable alternative to concrete or asphalt paving. This permeable paver is specifically engineered to offer benefits over traditional concrete or asphalt parking, to include an overall decrease in stormwater runoff. Additionally, this alternative permeable paver offers an opportunity to provide adequate means of striping for vehicle maneuvering/parking areas to ensure order and safety within parking lots.

RECOMMENDATION

City Staff has reviewed the requests and is recommending approval of **BOA Case BA23-01**.

PUBLIC COMMENTS

Property owners within 300 feet of the project site were mailed notification of this proposal and a Notice of Public Hearing was published in the paper on March 29, 2023. Public responses will be provided in the Board packets or at the meeting.

EXHIBITS

- A. Aerial Location Map
- B. Future Land Use Plan Map
- C. Current Zoning Map
- D. Site Photo(s)
- E. Special Exception Application
- F. "TRUEGRID" Supporting Documents

Exhibit "A" Aerial Photo



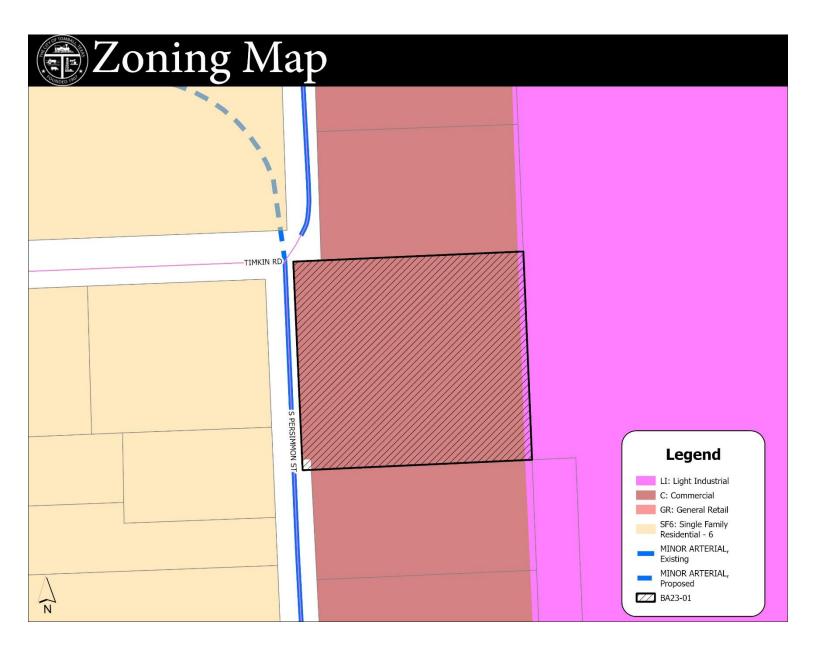


Exhibit "D" Comprehensive Plan

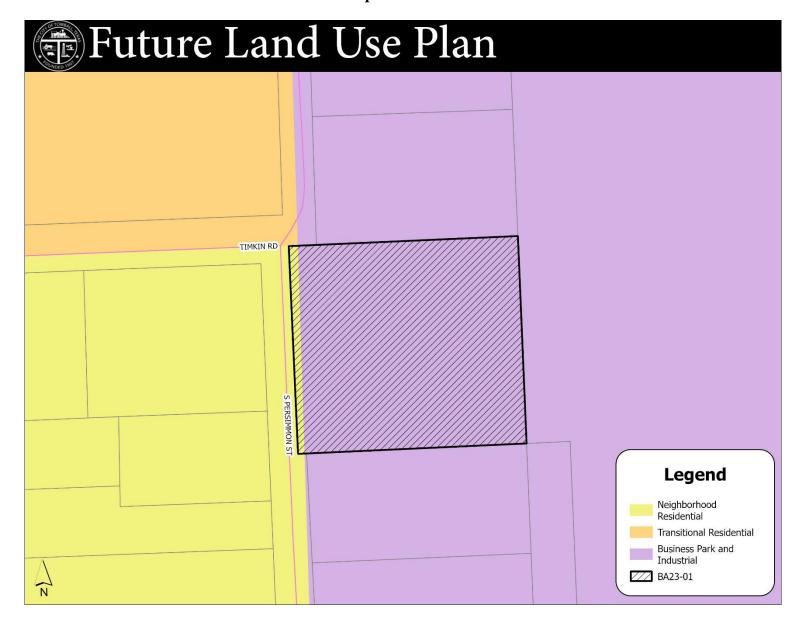


Exhibit "D"
Site Photo(s)





Exhibit "E" Special Exception Application

Revised 5/19/15



ZONING BOARD OF ADJUSTMENTS (BOA) SPECIAL EXCEPTION APPLICATION

Community Development Department Planning Division

Special Exception Defined: A special exception is a type of variance, but is differentiated from a variance in that a special exception does not require a finding of a hardship and applies only to nonconforming uses and structures, off-street parking requirements and landscaping requirements.

APPLICATION SUBMITTAL: Applications will be *conditionally* accepted on the presumption that the information, materials and signatures are complete and accurate. If the application is incomplete or inaccurate, your project may be delayed until corrections or additions are received.

Applicant Name: Caitlin Munch		Title: Ex	cility Owner Rep		
3 (5) (5) (6)	N Rain Forest Ct.		State: TX		
Zip: 77380					
Phone: (<u>915</u>) <u>588-95</u> 4	18 Fax: ()	Email: ca	tlin.munch@huckabee-inc.com		
Owner Name: Clay Cash	natt	Title:	Owner		
	S Persimmon St		State: Tx		
Zip:_ 77 <u>375</u>		Gity	<u> </u>		
Phone: ()	Fax: ()	Email:			
574H	Conversion	of an existing 12,500 SF buildin	g, previously commercial and		
Description of Propo	osed Project: manufacturing (Con				
Legal Description of I	Property: LT 4 BLK 1 Persimmon Fla Survey/Abs		Subdivision Name with Lots/Block]		
HCAD Identification	Number: 1187930010004	Acreage	Acreage: 1.5892		
Current Use of Prope	rty: <u>Previously Compass Instruments</u> proposed use as L	- industrial and commercial cir eader Fitness, health and welli	cuit board manufacturer, ness gym.		
City of Tomball, Texas	501 James Street, Tomball, Texas 77.	375 Phone: 281-290-1405	www.tomballtx.gov		

SPECIAL EXCEPTION(S) REQUESTED

No on-street parking shall be counted as meeting the requireme	ents of this chapter and may be restricted or prohibited by the
city.	
Special Exception(s) Requested:	
We would like to apply to utilize TrueGrid for the additional 10 p.	arking stalls required to meet the latest Tomball parking
requirements.	
A letter describing the requested special excepting pplication. Please attach separate sheets(s) as no	ion(s) <u>must</u> be submitted in conjunction with thi eccessary.
This is to certify that the information on this	form is COMPLETE, TRUE, and CORRECT
and the under signed is authorized to make this application does not constitute approve delays and possible denial. I also understand	form is COMPLETE, TRUE, and CORRECT this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board enecessary to protect adjacent property owner eneral welfare.
and the under signed is authorized to make this application does not constitute approve delays and possible denial. I also understand of Adjustments may impose conditions as are	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board enecessary to protect adjacent property owner
and the under signed is authorized to make this application does not constitute approve delays and possible denial. I also understand of Adjustments may impose conditions as are	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board enecessary to protect adjacent property owner meral welfare.
and the under signed is authorized to make this application does not constitute approved delays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board enecessary to protect adjacent property owner eneral welfare. 3/01/2023
and the under signed is authorized to make this application does not constitute approve delays and possible denial. I also understand of Adjustments may impose conditions as are	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board enecessary to protect adjacent property owner meral welfare.
and the under signed is authorized to make this application does not constitute approved delays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board enecessary to protect adjacent property owner eneral welfare. 3/01/2023
and the under signed is authorized to make this application does not constitute approvadelays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board encessary to protect adjacent property owner eneral welfare. 3/01/2023 Date
and the under signed is authorized to make this application does not constitute approved delays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board encessary to protect adjacent property owner eneral welfare. 3/01/2023 Date 03/02/2023
and the under signed is authorized to make this application does not constitute approvadelays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board encessary to protect adjacent property owner eneral welfare. 3/01/2023 Date 03/02/2023
and the under signed is authorized to make this application does not constitute approvadelays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board encessary to protect adjacent property owner eneral welfare. 3/01/2023 Date 03/02/2023
and the under signed is authorized to make this application does not constitute approvadelays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board encessary to protect adjacent property owner eneral welfare. 3/01/2023 Date 03/02/2023
and the under signed is authorized to make this application does not constitute approvadelays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board encessary to protect adjacent property owner eneral welfare. 3/01/2023 Date 03/02/2023
and the under signed is authorized to make this application does not constitute approvadelays and possible denial. I also understand of Adjustments may impose conditions as are and to ensure the public health, safety and ge	this application. I understand that submitting al, and incomplete applications will result in that in granting a special exception, the Board encessary to protect adjacent property owner eneral welfare. 3/01/2023 Date 03/02/2023

Submittal Requirements

The following summary is provided for the applicant's benefit. However, fulfilling the requirements of this summary checklist does not relieve the applicant from the responsibility of meeting the regulations in the Zoning Ordinance, subdivision regulations, and other development related ordinances of the City of Tomball.

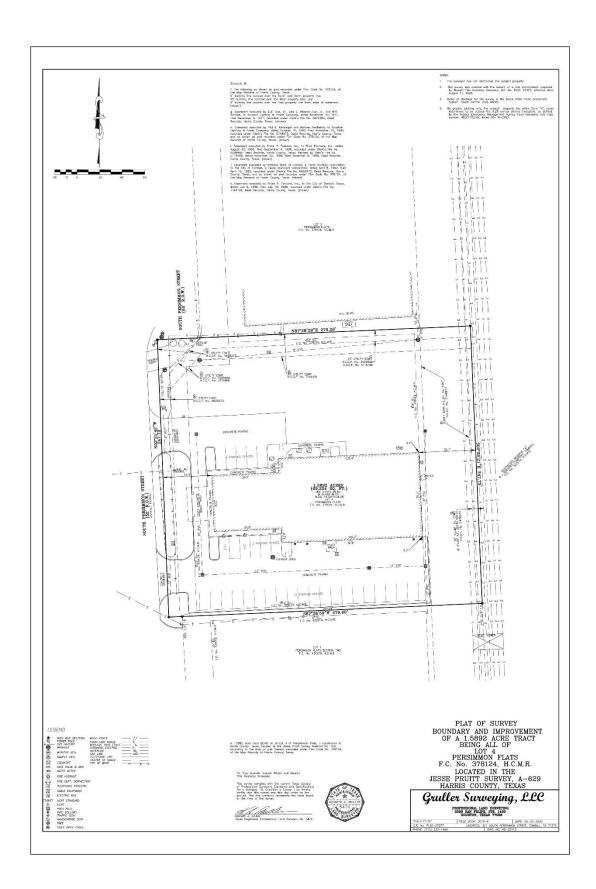
A complete application must include:

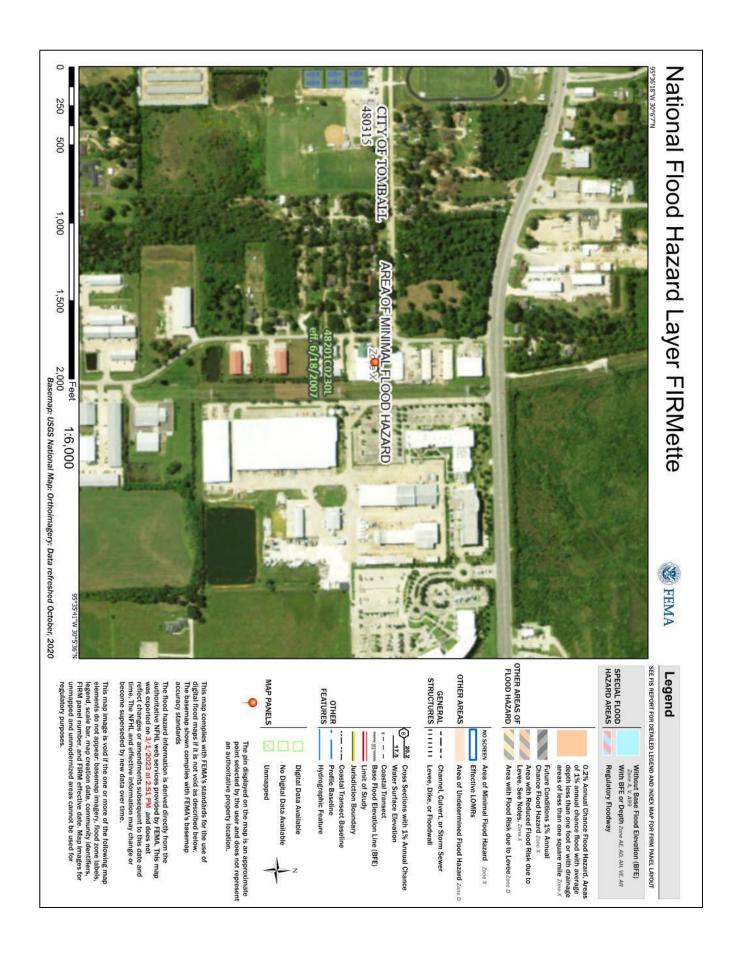
- Application Fee: \$100 residential (except multi-family); \$250 non-residential & multi-family
- Letter explaining the special exception(s) in detail
- Metes & bounds of property
- Site plan, plot plan, or drawing showing the requested special exception(s)
- Other necessary information (maps, drawings, pictures, etc.) to explain the special exception(s)

The City's staff may require other information and data for specific required plans. Approval of a required plan may establish conditions for construction based upon such information.

City of Tomball, Texas 501 James Street, Tomball, Texas 77375 Phone: 281-290-1405 www.tomballtx.gov

≈
Dear City of Tomball,
We are requesting the use of "TrueGrid" pavers in lieu of concrete pavement for an additional (10) parking spots for the 321 S Persimmons renovation. The proposed plan for the existing structure is to renovate the building from a commercial and industrial facility (Compass Instruments) into a health and wellness center (Leader Fitness Health and Wellness).
The goal of the variance request is to meet the parking requirements, as defined by the city of Tomball at 1 parking stall for each 300 SF of the facility, while minimizing impact to the existing site drainage.
If we are approved to utilize this substitution our team will ensure to utilize high visibility markers (SuperSpot) to appropriately to signify parking lanes. We have included photos of our intent within the attached package.
Sincaraly
Sincerely, Caitlin Munch
Owner's Rep





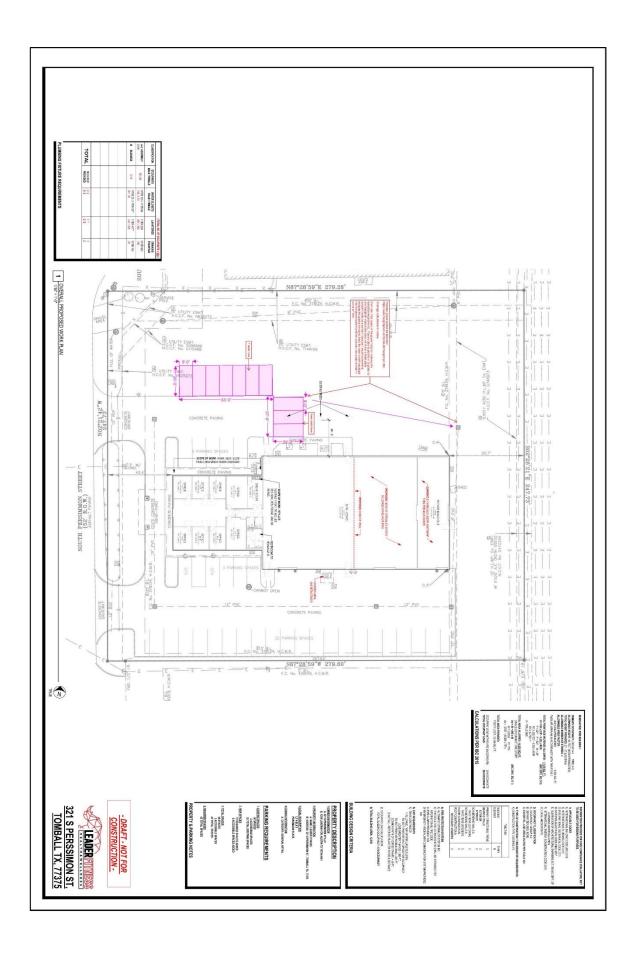


Exhibit "F" TRUEGRID Spec's



TRUEGRID was developed in the U.S.A, and TRUEGRID is manufactured and will always be manufactured in the U.S.A.

It is produced from 100% post-consumer recycled material.

We take plastic products with a short life cycle that end up in our land-fills, and we turn them into TRUEGRID...a product with a very long life cycle...which can then be recycled again.

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. 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 800 inches/hour. This is several orders of magnitude higher than all the rainfall intensities encountered in the Southwest and Midwest USA. These high infiltration rates are also 4 orders of magnitude higher than most soil infiltration rates. The TRUEGRID system relies on the ability of the void space within the surface material and the sub base to receive, store, and infiltrate water into the underlying sub soils. The aggregate sub base provides a temporary "reservoir", receiving the inflow from the surface pavement layer and providing temporary storage while the water is discharged to the sub grade through infiltration or released to surface discharge through a sub drain system.

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.

TRUEGRID has been honored as one of two winners, from hundreds of green technology products considered, to receive grants support for education from entities including the U.S. Department of the Interior and the U.S. Department of Energy. These grants were awarded to TRUEGRID to promote and educate others on the benefits of TRUEGRID as an eco-friendly alternative to concrete and asphalt. TRUEGRID was chosen due to its low impact development properties, its stormwater maintenance /high permeability qualities, high load capacities, long life expectancy-no maintenance performance and 100% post-consumer recycled material composition.

The value of the TRUEGRID systems includes:

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 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. Specific field data on the reductions of pollutant concentrations by various permeable pavements are limited. However, reductions in the concentrations of total suspended solids and associated constituents, such as metals, oils, and greases appear to be relatively high. The fact that all permeable pavements significantly reduce the average annual runoff volume makes them very effective in reducing pollutant loads reaching the receiving waters. 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. Adsorption and ion exchange occur as storm water travels through the unsaturated (vadose) zone below the aggregate base and reduce the particulate and dissolved pollutant loading to the groundwater (saturated zone). Permeable pavement can be used to provide ground water recharge. Some data suggest that asmuch as 70% to 80% of annual rainfall will go toward ground water recharge (Gburek and Urban, 1980). A third study by Brattebo and Booth (2003) indicates that many trademarked permeable paver systems effectively reduced concentrations of motor oil, copper, and zinc. Furthermore, the study found that almost all precipitation that fell on the permeable pavers infiltrated even after 6 years of daily use as a parking area.

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.

TRUEGRID will add to LEED Credits in the following categories.

- Water Efficiency
- Innovation & Design
- Sustainable Sites
- Indoor Environmental Quality
- Materials & Resources
- Energy & Atmosphere

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).

Chart A: Permeable Base

AASHTO #57 permeable sub base material defined as:

Sieve Size		Percent Passing	
mm	In.	#57	Typical
37.5	1-1/2	100	100
25	1	95-100	97
19	3/4		75
12.5	1/2	26-60	45
9.5	3/8		25
4.75	#4	0-10	5
2.36	#8	0-5	2

www.truegridpaver.com | 6110 Abbott Drive, Omaha, NE 68110 | 1-855-355-GRID

