ECOLOGICAL PAVER SYSTEMS by APT

Engineered Ecological Solutions for sustainable site development

Industrial, commercial or pedestrian pavements can be built better, quicker and last longer with our systems.

Form and Function

Elegant system designs that protect the environment yet bring lasting value to land use for the client.

The Best Working System In The Industry...BASS™

50 year pavement design clay or concrete pavers wearing course

Unique manufacturing processes yield pavers with high compressive strengths, 8,000 psi-15,000 psi with low absorption rates that exceed ASTM standards. Concrete or clay pavers have been used in streets and industrial environments for well over fifty years and have a proven performance for durability. These same processes have been applied to production of our permeable pavers that are engineered to be utilized in vehicular or pedestrian applications. The use of colors, textures, as well as shapes may be used in combinations to execute your designs.

Maintenance

Maintenance for permeable pavers will require similar means and methods that are employed for impervious surfaces as well as frequency which will vary based on site conditions and region. Surfaces should be vacuum swept to remove sediment and debris. Remedial maintenance will be required when sediment has clogged openings preventing infiltration. These clogged materials may be removed and replenished to reinstate infiltration. Snow removal will be accomplished with standard snow plows. Typically salt use will be reduced as surface ice reformation during a freezes-thaw cycle will not occur as the snowmelt enters the system which does not hold moisture. Studies support internal aggregate temperatures will stay above freezing while air temperatures are below freezing. Paver units and aggregates may be removed and reinstated if utility access is required leaving no scars.

Air Quality

BASS™ may be designed with a TX Active™ surface to improve air quality. This titanium dioxide based material will also act as a self-cleaning agent for soot, algae and other organic particulates. Smog is composed of airborne pollutants that are harmful to human health. Photo catalytic cements when exposed to sunlight, accelerate chemical reactions to form oxidizing agents that will decompose these organic and inorganic pollutants.

Design Life-Cycle Costing

Paver units have demonstrated a more superior performance regarding wear and replacement than conventional materials. Capitalization, maintenance and replacement pricing have been used to determine lower pavement costs for BASS™ when compared to conventional impervious asphalt pavements. Porous material and other pervious surfaces do not demonstrate these same qualities. Life-cycle costing is site specific and we can help provide this analysis.

Sustainability LEED & LID Integrated Systems

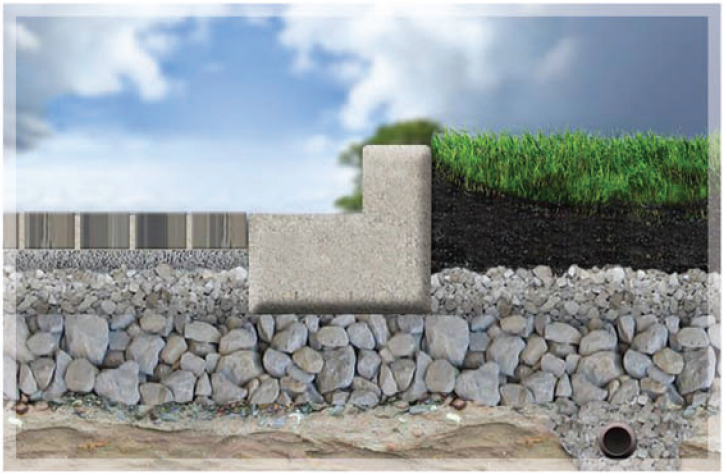
Green initiatives make BASS™ an ecological solution for your project. Sustainable site design credits are available for LEED projects, Star Energy and other advocates of environmental design including LID. These credits become available when using BASS™ as a major force in the treatment train approach for a more natural method of stormwater management. BASS™ is a strategy to capture and treat first-flush pollutants, promote groundwater recharge and improve land use. This system may be used in rooftops or elevated plaza applications as well with on-grade vehicular and pedestrian areas. BASS™ is adaptable for most sites where price-quality-service count.

Water Quality

BASS™ will provide a viable TSS removal rate exceeding 80%-90%. Additional capture of particulates and fines occur in the patented voids and joints adhering to the aggregates. Microbial pollutants are trapped internally where enzymes have established a bacterial colony resulting in water quality meeting EPA Phase II Rule. Phosphorous, nitrogen, metals and other nutrients as well as hydrocarbons from oil drippings will be captured and removed to allow resultant runoff to enter a lake, stream or become a discharge that will provide cleaner water for the environment. BASS™ may be designed for full, partial or no exfiltration and coupled with bio-remediation or other BMP's to further enhance water quality.

Runoff Reduction/Volume Control

BASS™ provides both means-high infiltration rates-to capture stormwater runoff reducing surface flows-and methods with ability to store this water under the pavement and controlling volume as storage for detention or retention. Initial infiltration rates exceeding 150"/hr have been established by academics with design rates of 50"-70"/hr recommended forecasting infiltration reduction in the first five years with a twenty year design value of 10"/hr. Insitu soils will determine the rate of flow into the soils and also determine the depth of aggregate required to provide adequate storage within the voids of the sub-base materials based on the storm event that the design is required to meet. Zero discharge is a requirement that can be met with BASS™.



Thermal pollution reduction

Light colored pavers exceeding an SRI value of .29 can be met and due to the fact that all pavers are produced in a quality controlled environment, consistency of color as well as finish will be assured, prior to placement. Reducing runoff with BASS™ will control water temperatures and not elevate stream temperatures that would harm the resident aquatic life.

Value

BASS™ is a multi-tasking system providing an owner with a long-term durable product that will out-perform and outlast other BMP's. This is achieved with less maintenance dollars that creates a better value for the owner. This site specific engineered system will enhance land planning and its usage, as well as provide a beautiful pavement surface that will be an asset that requires less maintenance than conventional pavement. Constructibility adds to this value as this contractor friendly system is ready for use immediately after it is installed and may be built during inclement as well as freezing weather.

Water Harvesting

BASS Reserve creates an opportunity to recycle treated stormwater runoff and be used in gray water applications. Zero discharge may be achieved the Aqua-Bric® Series Pavers capturing and treating runoff as designed. Water harvesting reservoirs can be created with various materials and stored for use in irrigation or other non-potable water applications. Solar powered pumps have been used to eliminate the need for electricity. We can help improve your water management strategy by capturing and reusing Nature's gift.

Infrastructure Reduction

BASS provides a method for municipalities to reduce their infrastructure costs while maintaining release rates from new development growth. The ability to capture and store water in the aggregate sub-base and control the release rate where ground permeability is low or poor, provides designers a strategy to manage this volume under the pavement and reduce site development costs. In addition, catch basins, conveyance costs and surface land areas used for detention/retention can be reduced or eliminated.

Security-Less Electricity

SRI pavers will increase reflectivity at night requiring fewer fixtures to meet lumen requirements as well as using less electricity. Lighter colored pavements will provide a higher level of security with less cost than asphalt pavements.

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