

Glossary for Pervious Concrete Applications

Batter ~ A condition experienced in drum type mixers that accumulates a coating of concrete on the inside of the drum. This condition usually includes a slight segregation with more cementitious parts of the mix battering the drum, while a more lean material is discharged...Extensive battering is indication of hydration flash and requires the load be rejected.

Banding Areas of conventional concrete making dividers between pervious concrete pavement sections and borders around the outer edges. Usually made with decorative colored or stamped concrete.

Cross roller, standard A roller deployed on extension handles, used to compress surface materials, usually on top of poly sheeting.

Cross roller, jointing A roller deployed on extension handles, used to compress surface materials and cut joints in the slab. The knife cuts a separation between concrete aggregate and forms a radius at both sides of the cut.

Detention basin

Dinosaur egg A firm ball consisting of cement and aggregate formed in pervious mixes. Usually caused by excessive load speed of dry components during batching operations

early-entry dry-cut saw—a tool designed to produce

joints in conventional concrete commencing 1 to 4 hours after finishing.

exposure condition, moderate cold—an environment, normally in temperate climate regions, in which concrete will only occasionally be exposed to moisture and will not be saturated before freezing and where no deicing agents or other aggressive chemicals are used.

Exposure condition, moderate dry Relative humidity at between 45% and 55%, calm or wind speed below 10 mph.

exposure condition, severe cold—an environment, normally in cold climate regions, in which concrete may be saturated or in almost continuous contact with moisture before freezing, and where deicing agents are used.

Exposure condition, severe dry Relative humidity below 45% and/or wind speed over 10 mph

Filter Fabric Geotextile designed to pass water through it while stopping the migration of fine soils into the voids of the recharge bed.

Hydration Stabilizing Admixture A concrete admixture intended used to slow the hydration more thoroughly than normal retarders.

hydrology designer designs pervious pavement systems relative to information from geotechnical, climate and weather considerations. This includes the selection of

materials for detention basins and collection basins, as well as the projected water elevations in each component of the system.

joint, construction—the surface where two successive placements of concrete meet, across which it may be desirable to achieve bond, and where the first has undergone final set before the next placement.

joint, contraction—formed, sawed, or tooled groove in a concrete structure to create a weakened plane to regulate the location of cracking resulting from the dimensional change of different parts of the structure.

Joint detail A drawing which illustrates the position of joints, relative to slab shape, dimensions and adjacent utilities.

Joint, isolation a normally vertical interface allowing relative movement without transferring sufficient tension, compression, or traction forces to negatively affect the performance of a structure or pavement. Joints separating slabs from slabs or structures with different movement from expansion, shrinkage or loads. Normally made from soft materials, accommodating movement while prevent foreign debris from entering the joint.

Joint profile A group of specifications stating the joint depth, width and the shape formed in both sides of the joint. This design is intended to weaken the slab to control the natural cracking process, maintaining alignment and relieving stresses as the concrete cures.

Joint sealant Soft joint filler material designed to seal the joint and to stabilize the concrete on both sides of the joint.

Lubricity describes the rheology of the paste in a pervious mix. Higher lubricity in cement paste allows aggregate to flow more freely into consolidation. At a certain point of moisture content, the cement paste will lubricate the movement of aggregate rather than restricting it's movement.

Meat ball

mix designer directs the selection of materials, material handling, batch sequencing and mix proportion limits for production of pervious concrete. Conducts direct interface with engineering as well as batching and installation operations.

Outfall ...vents

Owner—the corporation, association, partnership, individual, public body, or authority for whom the Work is constructed.

pavement, pervious—a pavement comprising material with sufficient continuous voids to allow water to pass from the surface to the underlying layers.

Pervious concrete pavement, generic Pervious pavement made with materials and admixtures that are readily available in open marketing.

Pervious concrete pavement, multi-layered Pervious pavement made in layers of different mix design.

Pervious concrete pavement, proprietary Pavement made with pervious concrete comprised of one or more material components available only through regulated supply by franchise or dealership controls.

Pond, Dry Detention A pond area where storm water is held until it is entirely dissipated by permeating the soil and by evaporation.

Pond, Retention A water reservoir with a maintained minimum water level. Storm water is held in retention and allowed to permeate soil or evaporate or both.

Proctor

Project Specification—the written document that details

requirements for the Work in accordance with service parameters and other specific criteria.

Recharge bed A layer of open graded aggregate base material placed below pervious pavement. Provides base material for the pavement and serves as a reservoir for storm water. Voids contained in the aggregate are dry detention area for water permeating the subgrade.

reference standards—standardized mandatory language documents of a technical society, organization, or association, including the building codes of local or state authorities, which are referenced in the Contract Documents.

Rejected load~ An order, made to declare a certain load or partial load rejected from continued delivery with no further retempering measures allowed. Such action has no consideration of charges or back charges but strictly defined relative to the integrity of the concrete and successful installation.

Retardant An admixture for concrete used to slow the process of cement hydration.

Riser strip A temporary elevation spacer installed above the finish elevation of the slab. Installed on formwork, cold slabs or screed rails to provide support for strike-off equipment to strike a surface elevation $\frac{1}{4}$ " to $\frac{3}{4}$ " above finish elevation. Used with hand rod, vibratory truss screed or motorized roller screeds with limited compaction . Removed prior to the use of a full-width static roller. Also known as a shim.

Roller, static A full-width compression roller manually propelled over the surface of pervious slab. Usually deployed after the removal of riser strips. Normally 10 inch diameter at 40 pounds per lineal foot with a handle at each end fastened to a bearing and axle.

rheology the examination and description of the ability of materials to deform and flow. Relates to the physical characteristics of the cementitious paste. Certain rheology is required to coat the aggregate with paste that will deform and reform into the paste bridge which binds the aggregate. Certain rheology is required to achieve the flowability that is essential to compaction.

Runout A condition of excess water content, over plasticity, etc. Shown by paste migration or unstable paste coating on aggregate.

Screed A support structure providing elevation for strike-off.

Screed, asphalt paver A hydraulic powered placement vehicle. Carries a supply of material while striking and compacting the surface, with elevation actuated by wire or skate. Supported by a platform based, track mounted vehicle, used for pervious concrete as well as asphalt materials.

Screed, hand rod A straightedge of magnesium or wood used to manually strike off the surface elevation of a slab.

Screed, laser A laser actuated hydraulic powered strike-off. Deploys a placement auger and motorized roller on the slab surface from a platform based, wheeled vehicle.

Screed, motorized roller A powered spinning tube supported by formwork, cold slab or screed rail. Strikes the surface with the face of the spinning tube as it is manually drawn over the slab surface in counter-rotating motion. Compacts surface materials.

Screed, slipform paver A wire actuated, hydraulic powered slipform. Deploys augers and internal vibrators while propelling a traveling form, supported by a platform based, track mounted vehicle.

Screed, vibratory floating A mechanically powered vibrating beam. Supported manually and drawn manually as it strikes the surface.

Screed, vibratory truss A mechanically powered vibrating structural truss. Supported by formwork, cold slab or screed rail. Strikes the surface as it is drawn over the slab surface.

Sieve analysis Data resulting from aggregate gradation testing. Shows amounts of mass percent retained or passed in a given sieve size.

Slump A test used to measure plasticity and moisture content of fresh concrete. Not applicable to pervious concrete.

Snot ball cement collected on mixing or placement equipment that can cause a small plugged area in the slab surface.

Specific gravity Mass or weight of materials relative to the weight of water.

Subgrade Soil native to the construction site or installed soil that provides the proper support and permeability for the recharge bed and/or pavement.

Silt barrier, vertical

Silt barrier, horizontal

Structural course the lower section of multilayered pavement.

subbase—a layer in a pavement system between the subgrade and the base course, or between the base course and the slab.

subgrade—the soil prepared and compacted to support a structure or a pavement system.

Transit Mixer ~ Categorized by drum configuration and blade type. forward, aft., paddle, spiral, fins. usually Fins... ..aggressive = 10 & mild = 1 agitation scale

Unit weight, aggregate The weight of a given volume of aggregate. Indicates amount of void space available for other components of a concrete mix design. Also indicates void space available for water in the design of a recharge bed.

Unit weight, concrete The weight of a given volume of fresh plastic concrete, normally one cubic foot.

Viscosity modifying admixture A concrete admixture, intended to increase the viscosity of the cement paste. Allows pervious concrete to contain a slightly higher water content without the cement paste becoming unstable.

Voids Open space left vacant in a volume of concrete or aggregate.

Void structure A series of interconnecting voids in a volume of pervious concrete, intended to provide a passage for the movement of water and air.

Water reducing admixture A concrete admixture, intended to increase the surface tension of the cement paste and aid in the separation and moistening of the cement particles.

Wear course Surface course