

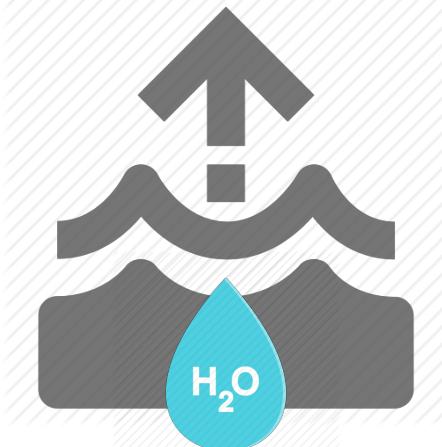


## LithTec™ Advantage Reduced Permeability Freeze/Thaw

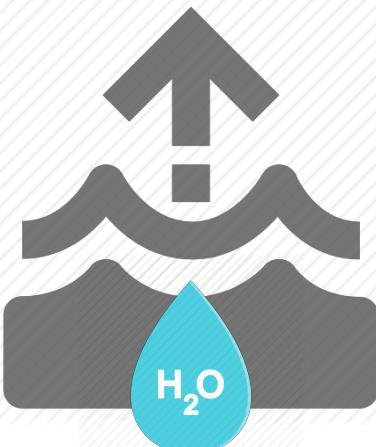
**Traditional Granular Base** is susceptible to high water tables, capillary action, and flooding. Water infiltration will result in poor performance under harsh freeze/thaw conditions.

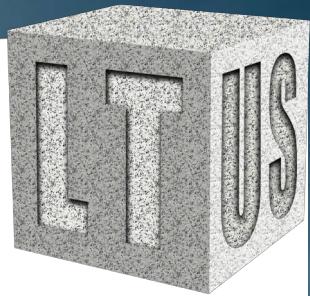


A **LithTec™ Treated Base** reduces permeability, helps keep moisture out, remains bound, and reduces porosity resulting in excellent performance under freeze/thaw conditions.



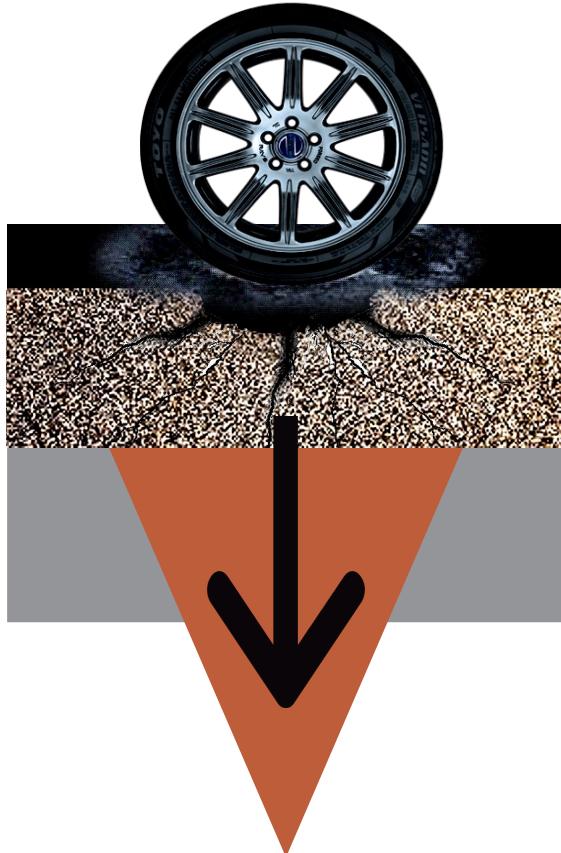
vs.



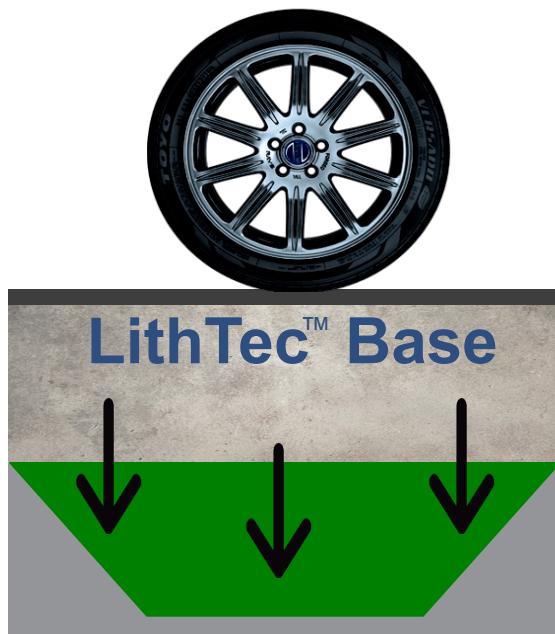


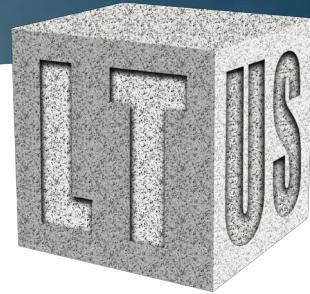
## LithTec™ Advantage Distribution of Stress

Traditional Granular Base produces an unbound, low stiffness, easily degraded base lift that results in concentrated stress that will degrade the sub-grade and lead to surface failure.



A LithTec™ Treated Base provides a bound, uniform, high stiffness, high flex base lift that results in a semi-rigid pavement-like base that distributes the stress resulting in a long-lasting road.





## LithTec™ Advantage

Full Depth Lithification (FDL) vs. Stabilized Full Depth Reclamation (FDR)

A LithTec™ treated Full Depth Lithification Base lift provides a number of structural performance advantages.

- An optimized performance LithTec™ base lift is capable of achieving higher strength values than a stabilized FDR treatment. In general, the maximum unconfined strength value for a cement-stabilized FDR lift is 400 psi. While cement can be added to increase strength values, it is not recommended as it becomes too brittle\*. However, a LithTec™ base due to increased ductility, increased density, reduced porosity, and overall lift matrix characteristics is capable of sustaining strengths from 400psi to 800psi. \*According to the Portland Cement Association.
- In addition to strength, LithTec™ retains increased ductility values at higher strengths. Increased ductility provides elasticity, durability, and resiliency.
- Achieving increased strength and ductility results increased resilient modulus values. In general, cement-stabilized FDR is limited by a 400 psi strength ceiling which results in limited resilient modulus values. Those values equate to structural numbers for road engineering purposes generally accepted between .2 and .26 with semi-rigid asphalt equating to a .44. LithTec™, due to increased resilient modulus values has been accepted by third party engineers up to a .44. This allows road engineers to provide additional structural credit to the base, and thus reduce the costly surface course credits required.
- LithTec™ retains higher performance characteristics in flood situations, when exposed to capillary action, and in the presence of high water tables. LithTec™ will retain 80%-85% of its structural values in submerged unconfined conditions.
- With 95%-98% of a FDR or FDL base lift being made up of the recycled onsite road materials, the small portion of chemistry utilized must be optimized. LithTec™ is the first fully customizable dry option that optimizes onsite road materials to provide the highest structural performance possible at an affordable cost.