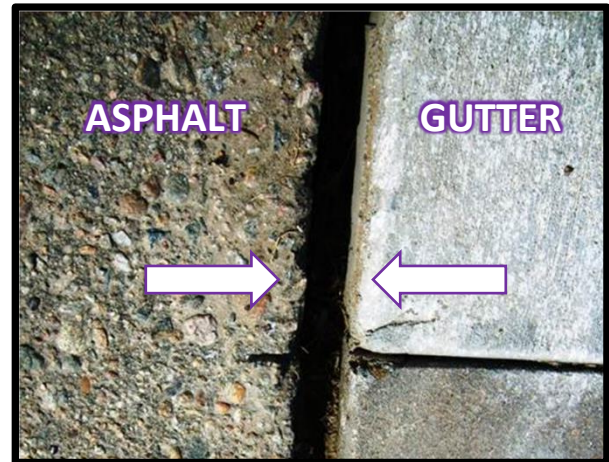


TECHNICAL BULLETIN

Asphalt Separation at Curb Lines

Roadways are typically designed with cross-slope to direct surface water flow from the pavement surface to the curb and gutter drainage system at the pavement edge. If surface water is not effectively removed, it can infiltrate the supporting subgrade and weaken the pavement structure. Separation of asphalt pavement from curb lines can significantly impact the maintenance and long-term performance of asphalt roadways.



CAUSE

Separation of asphalt away from curb & gutter is *not* a function of the asphalt shrinking (thermal induced 'shrinkage' cracking does occur when the thermal stresses exceed the tensile strength of the asphalt binder), instead it is most often a result of differential soil movement.

Moisture Induced Differential Movement: Subgrade materials, primarily cohesive soils (clays and silts), are prone to shrinkage or swelling movement induced by frost heave and changes in moisture content (e.g., surface water infiltration thru cracks/potholes, landscape irrigation, etc.). This movement induces different stresses at the boundaries of different construction materials (e.g., asphalt pavement and concrete curb & gutter) and is commonly found at the interface of flexible/rigid pavements.

