

Pavement Distress

TYPE		CAUSES
Cracking		
1	Longitudinal	subgrade settlement; bad paving joint
2	Transverse	thermal? reflection? trench related?
3	Alligator (wheel path)	load related; weak pavement structure
4	Edge	lack of support; settlement
5	Slippage	poor bond between AC lifts
Disintegration		
1	Raveling (surface)	dry / lean AC mix (not enough asphalt)
2	Potholing	advanced alligator cracking
3	Stripping	asphalt binder debonds from aggregate in presence of water; AC mix problem
Flushing / Bleeding		rich AC mix (too much asphalt); too much fine dist (P200) in mix
Distortion		
1	Rutting (in wheel track)	weak (low stability) AC mix; compacting under traffic, either in AC or base layer
2	Shoving	weak (low stability) AC mix; slippage?

Pavement Maintenance Strategies

STRATEGY	DESCRIPTION	MATERIAL INVOLVED	COMMENTS
Crack Sealing	flowable sealer	Hot: asphalt + rubber or polymer Cold: emulsion with polymers	must clean & dry crack; avoid overfill & smearing
Fog Seal	light spray of emulsion	diluted CSS or SS01h emulsion	easy does it! light traffic areas only; good over chip seal
Chip Seal	heavy emulsion spary + rock chips	RS or CRS emulsion with latex (e.g., PMCRS-2) + single size rock chips	for open roads, not residential streets or parking lots or bleeding areas
Slurry Seal	very thin cold mix	quick-set emulsion 9QS or CQS) + graded aggregate	Types 1, 2, & 3; avoid parking lots
Parking Lot Sealcoat	tough fine slurry resists steering scuffs	special emulsion wit hard asphalt + fine aggregate & additivies	good for cul de sacs & play areas too
Cape Seal	chip seal + slurry seal	(see above)	for moderate to high traffic areas
Micro Surfacing	special slurry seal with polymers and additives	special high % plymer emulsion + graded aggregate	a tough armor coat; good for rut filling & leveling