



5G-5 Jointing Concrete Overlays

The following table describes current practice regarding the jointing of concrete overlays. Short joint spacing for PCC overlays allows the slab to deflect instead of bend. Therefore, this creates the need to balance joint spacings with thickness.

Table 1: General jointing practices for PCC overlays

	Bonded	Unbonded	Conventional Whitetopping	Ultra-Thin Whitetopping
Typical Thicknesses	3 to 4 inches	5 to 12 inches	5 to 8 inches	2 to 4 inches
Joint Considerations	<ul style="list-style-type: none"> • Achieve bond between two PCC layers • Match transverse joints of overlay with those in existing pavement; saw full-depth of overlay • Do not saw longitudinal joint; it is typically difficult to replicate existing joint 	<ul style="list-style-type: none"> • Achieve separation between two PCC layers with approximately 1 in of HMA • Use conventional longitudinal jointing • Mismatch transverse joints of overlay with those in existing pavement • A good rule of thumb is to provide transverse joint spacing in nearest feet that does not exceed 2 times the overlay thickness in inches 	<ul style="list-style-type: none"> • Patch or seal existing HMA thermal cracks ≥ 2 in • A good rule of thumb is to provide transverse and longitudinal joint spacing in feet, that does not exceed 2 times the overlay thickness in inches 	<ul style="list-style-type: none"> • Lightly mill HMA surface to enhance bond • A good rule of thumb is to provide transverse and longitudinal joint spacing in feet, that does not exceed 1.5 times the overlay thickness in inches • Do not seal joints

Source: "Portland Cement Concrete Overlays: State of the Technology Synthesis, 2002." United States Department of Transportation and Federal Highway Administration.