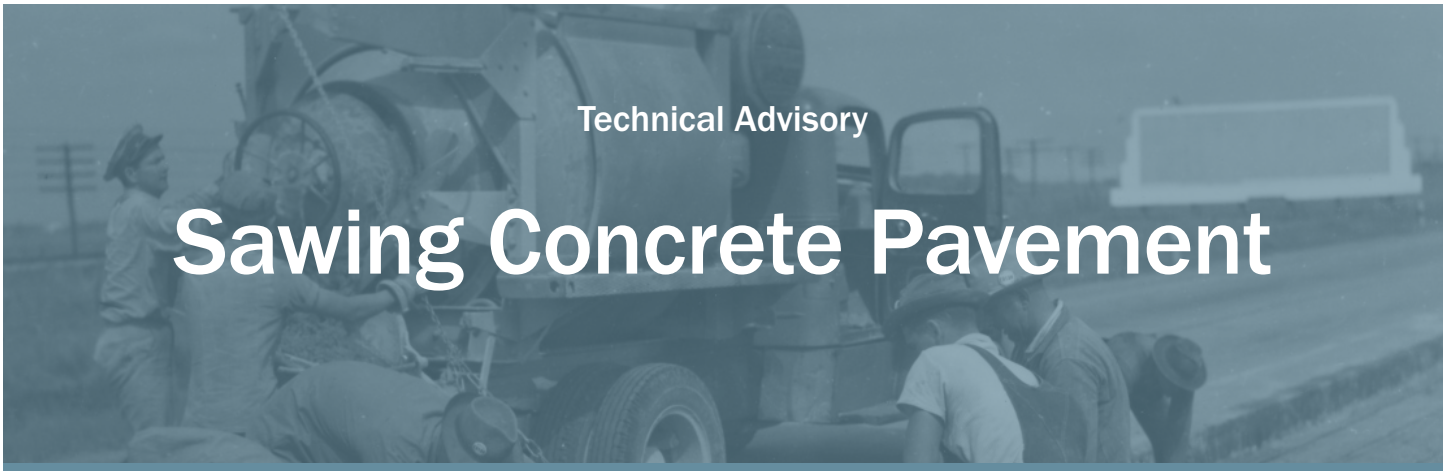
Texas Department of Transportation



Technical Advisory

Sawing Concrete Pavement

Uncontrolled longitudinal and transverse cracking greatly decrease pavement life and greatly increase future maintenance costs.

Most of these cracks are usually the result of not sawing soon enough, deeply enough, or both. A properly sawed joint produces a weak plane that generates a full depth crack at the desired location and thus reduces the likelihood for an uncontrolled crack at an undesired location. Joints must be sawed as soon as possible without causing significant raveling of the concrete due to the early saw cut. Contractors must have enough saws and crew available to accomplish the sawing within the necessary timeframe. The timing of the saw cutting will vary based on the many factors that affect concrete setting times, rates of strength gain, and drying shrinkage. A backup saw should always be available and is required by Item 360 of the TxDOT Standard Specifications.

The minimum depth of the various saw cut locations are shown in Table 1. It is important to verify this depth at the time of joint cutting to ensure the pavement will crack at the sawed joint and not elsewhere.

Saw cutting to create the sealant reservoir is not time sensitive and can be done at a time appropriate to the schedule for opening the lanes to traffic. All joints must be cleaned in accordance with Item 438 or Item 713, as applicable, before placing the joint compound.

See Table 1 for sawed joint properties. Refer to Standard JS-14 for additional information.

Table 1: Information chart for saw cut joints

	Classification	Saw Cut				Joint Sealant		Backer Rod	Note
		First Saw Cut		*Second Saw Cut*		*Thickness [in.]*	*Final Distance from the Pavement Surface*		
		Depth [in.]	Width [in.]	Depth [in.]	Width [in.]				
Continuously Reinforced Concrete Pavement	**Longitudinal Sawed Contraction Joint**	T/3	1/16 to 1/4	5/8	1/4	1/4 to 1/2	1/8 to 1/4	No	
	Longitudinal or Transverse Construction Joint	5/8	1/4	–	–	1/4 to 1/2	1/8 to 1/4	No	
Concrete Pavement Contraction Design	**Transverse Sawed Contraction Joint**	T/3	1/16 to 1/4	1.5 MIN.	3/8	1/4 to 1/2	1/8 to 1/4	Yes	Preformed compression seals (PCSs) shall be in accordance with the manufacturer's recommendation and "Method A" in JS-14.
	Longitudinal Sawed Contraction Joint	T/3	1/16 to 1/4	5/8	1/4	1/4 to 1/2	1/8 to 1/4	No	
	Longitudinal or Transverse Construction Joint	5/8	1/4	–	–	1/4 to 1/2	1/8 to 1/4	No	
	Repair/Replacement of existing Transverse Joint, (Item 361/REPCP-14)	T/3	1/16 to 1/4	–	–	1/4 to 1/2	1/8 to 1/4	Yes	

Contact Information

If you have any questions regarding the content of this article, please contact

Andy Naranjo
Andy.Naranjo@txdot.gov | 512-506-5858