

Missouri Department of Transportation

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**TO:** Craig Switzer – SWde  
Sean Matlock – SWde

**FROM:** Jeff Kroner – COcm

**DATE:** June 14, 2019

**SUBJECT:** J7P0601 I-49 McDonald County  
Pavement Type Selection

Project Description:

This project will construct new interstate roadway to complete I-49 from near Pineville, Mo. to the Arkansas State line.

Pavement Design Parameters:

The following traffic information was used in designing the pavement thickness.

Location	Construction AADT	Truck Percentage	Growth Rate
I-49 (n/o MO 90)	16,910	24.8 %	2.0 %
I-49 (s/o MO 90)	21,035	19.5 %	2.0 %
MO 90 (w/o US 71)	631	4.4 %	2.0 %
MO 90 (e/o US 71)	707	11.8 %	2.0 %

The default parameters for an AASHTO A-7-6 soil were used for design purposes.

Equivalent Pavement Designs:

The following table lists the equivalent pavement design thickness for the given location:

Equivalent Pavement Designs <sup>(1)</sup>				
Location	Base Type	HMA Design <sup>(2)</sup>	PCCP Design <sup>(2) (3)</sup>	Outside 9' of Outside Shoulder
I-49	18" Rock Base	<p style="text-align: center;"><u>11" HMA</u>                      1¾" SP125B w/ PG 76-22                      over                      3" SP250B w/ PG 76-22                      over                      6¼" SP250C w/ PG 64-22</p>	<p style="text-align: center;"><u>9" PCCP</u>                      15 ft. joint spacing                      and 1¼" dowels</p>	A2

(1) Refer to the EPG "Other Aspects of Pavement Design – Alternate Categories" for guidance on setting up alternate or optional pavement bid items for the contract or contact Central Office Design for assistance.

(2) Full depth pavement width to include 4' inside shoulder and inside 1' of outside shoulder (29' width).

(3) Include P/3 longitudinal sawcut between inside shoulder and passing lane pavement for PCCP design.

<b>Equivalent Pavement Designs<sup>(1)</sup></b>				
<b>Location</b>	<b>Base Type</b>	<b>HMA Design</b>	<b>PCCP Design</b>	<b>Shoulders</b>
I-49 Ramps & MO 90 re-alignment	18" Rock Base	<u>10" HMA</u> 1¾" SP125C w/ PG 64-22 over 8¼" SP250C w/ PG 64-22	<u>8" PCCP</u> 15 ft. joint spacing and 1¼" dowels	A2

Please contact me at (573) 619-5392 if you have any further questions.

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