
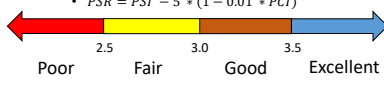


WYDOT's Composite Condition Index




- Present Serviceability Rating (PSR)
 - Composite rating to determine overall condition of section; 0-5 scale
 - Asphalt: combines PSI, rutting, and PCI (Cracking)
 - $PSI = 5.35 * e^{(-0.0058 * IRI_{HCS})}$
 - $PSR = PSI - 4 * Rut^2 - 3 * (1 - 0.01 * PCI)$
 - Concrete: combines PSI and PCI only
 - $PSI = 5 * e^{(-0.0038 * IRI_{HCS})}$
 - $PSR = PSI - 5 * (1 - 0.01 * PCI)$



By Sarah Rickgauer, P.E.

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FHWA's Fixing America's Surface Transportation (FAST) Act – Measured Conditions




Pavement Condition Thresholds

	Good	Fair	Poor
IRI (inches/mile)	<95	95-170	>170
Rutting (inches)	<0.20	0.20-0.40	>0.40
Faulting (inches)	<0.10	0.10-0.15	>0.15
Cracking (%)	<5	5-20 (asphalt) 5-15 (JCP) 5-10 (CRCP)	>20 (asphalt) >15 (JCP) >10 (CRCP)


Calculation of Pavement Measures

Overall Section Condition Rating	Pavement Type		Measures
	Asphalt and Jointed Concrete	Continuous Concrete	
Good	3 metric ratings (IRI, cracking and rutting/faulting)	2 metric ratings (IRI and cracking)	percentage of lane-miles in "Good" condition
Poor	≥ 2 metrics rated "Poor"	Both metrics rated "Poor"	percentage of lane-miles in "Poor" condition
Fair	All other combinations	All other combinations	



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FHWA's Fixing America's Surface Transportation (FAST) Act – Present Serviceability Rating (PSR)




Present Serviceability Rating:

- Must be less than **40 MPH**
- Rate on **0 – 5 Scale**
- Reported in **0.1 mile** length
- Consideration about Pavement Section:
 - Age
 - Smoothness
 - Amount and type of Cracking
 - Rutting or raveling on Asphalt
 - Faulting or pumping on Concrete
 - Spalling, Patching or Scaling

Calculation of Pavement Measures

Overall Section Condition Rating	Pavements with Speed Limit less than 40 MPH	Measures
Good	PSR ≥ 4.0	% of lane-miles in "Good" condition
Poor	PSR ≤ 2.0	% of lane-miles in "Poor" condition
Fair	2.0 < PSR < 4.0	



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