MEMO_____State of Wisconsin

Date: March 17th, 2014
To: WIsDOT Planning and Project Development Personnel

From: Craig Vils
Pavement Data Unit

Subject: 2013 Ride Measurement Report

There are 90 projects in the 2013 Ride Measurement Report. 17 are Portland Cement Concrete (PCC) pavements, and 73 are Asphaltic Concrete (AC) pavements. We measured ride on 164.15 lane miles of PCC and 788.62 lane miles of AC pavements. A total of 952.77 lane miles of newly constructed, rehabilitated, or resurfaced pavements were tested, i.e., measured for ride. *Note* that there were approximately 307 let projects in 2013. However, some of these were not finished, some were bridges, some were intersections, some interchanges, some ramps, and some were off-STN.

For 2013 unfinished or missed projects, we will pick up baseline ride values in the spring of 2014, but these will not be included in this or future Ride Measurement Reports. (Typically, we miss at least several projects each year due to inclement weather or extended project timelines.)

Using the International Roughness Index (IRI) in which a lower number corresponds to better ride, average ride on:

Urban PCC pavements =	1.59,
Rural PCC pavements =	1.60,
Urban AC pavements =	1.04,
Rural AC pavements =	0.74.

The average IRI for AC was based on all AC projects since all resulted in a new surface. The average IRI for PCC was based only on PCC projects resulting in a new surface. PCC new surface projects include Reconstruction, Resurfacing, and Replacement techniques. PCC projects not included in the reported IRI include Patch and Grind, Dowel-Bar Retrofit, and Partial-Depth Repair techniques.

Not too much should be read into the differences in ride between the two pavement types since it is generally accepted that smoothness in AC pavements and PCC pavements is measured differently using today's standard equipment.

An important consideration when analyzing ride data is that, nationwide, engineering studies have shown that the progression of distress and therefore Service Life itself are closely related to a pavement's initial ride. Pavements with a smoother initial ride, all other considerations being equal, will last longer in a serviceable manner.

As indicated above, the IRI for AC pavement structures includes: new AC pavements, AC overlays over AC base, and AC overlays over PCC base. Likewise, IRI for PCC pavements is based on construction of new Type 8 (dowelled and jointed) pavements as well as concrete overlays of all kinds. Some major concrete rehabilitative techniques such as dowel-bar retrofits, surface grinds, and partial-depth repairs were not included in average ride.

When looking through the data below, be careful not to quickly formulate conclusions. For example, average ride by contractor doesn't say anything about initial conditions (including rural or urban), weather, or construction technique (direct overlay, pulverize and relay, etc). All these factors can contribute to a pavement roughness. In addition, certain statistical tests would be required to establish the validity of the observed trend(s).

If you have any questions, concerns, or comments regarding this report, please contact Bill Duckert at (608) 246-5440 or william.duckert@dot.state.wi.us, or Craig Vils at (608) 242-8017 or craig.vils@dot.state.wi.us. Your input can help guide the direction of this report.

` **Explanation of Terms**

The definitions are derived from the Facilities Development Manual (FDM) and from construction nomenclature. Newly constructed pavements have been divided into 4 categories, Reconstruction, Replacement, Resurfacing, and Rehabilitation.

1) **Pavement Reconstruction** – means total rebuilding of both the pavement and base course of an existing highway to improve maintainability, safety geometric and traffic service.
This type of construction may or may not include changes to the sub-grade.
Newly constructed roads are included in this category
.
2) **Pavement Replacement** – means removal of the total thickness of all paving layers from an existing roadway and providing a new paved surface without changing the sub-grade.
This type of construction does not include changes to the base course.

3) **Pavement Resurfacing** – means placing a new pavement surface on an existing roadway to provide a better all weather surface, a better riding surface, and to extend the pavement life.
Part or the entire old pavement must remain with this type of construction.

4) **Pavement Rehabilitation** – means corrective action to correct a roadway failure. This type of construction may include: rut wedging, grinding, retrofit dowels, partial depth repair, extensive patching and other similar practices.
Location definitions are taken from the Location Control Manual. The State Trunk Network (STN) Roadway Log is used to determine the location of the construction project. The report divides the construction into two groups: Urban and Rural.

1) **Urban** – Any roadway section within the boundaries of a local government. This would include city, village, and towns.

2) **Rural** – Any roadway section that is outside the boundaries of a local unit of government.

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
Rural												
Reconstruction												
North Central												
MARATHON	1053-04-72	29	STH 107 - CTH O	American Asphalt	14.28	0.46	6.25	E-30	Standard	0.00		Rubbilize
North West												
ST. CROIX	8070-01-73	63	STH 46 - STH 64	Monarch Paving	9.17	0.63	7.25	E-10	Special	0.00		Mill and Relay
ST. CROIX	8070-01-74	63	STH 46/64 INTERSECTION	Monarch Paving	0.97	1.99	8.00	E-10	Special	0.00	Dense	
ST. CROIX	8070-01-75	63	STH 64E INTERSECTION	Monarch Paving	0.53	0.75	7.25	E-10	Special	0.00		Mill and Relay
South East												
WAUKESHA	1090-19-71	43	STH 83 - STH 164 SB	Payne and Dolan	14.00	0.71	7.75	E-30	Standard	3.00		Rubbilize
WAUKESHA	1090-19-72	43	STH 83 - STH 164	Payne and Dolan	13.89	0.75	7.00	E-30	Standard	0.00		Rubbilize
South West												
DANE	5845-01-75	51	QUAM DR - CTH B	Payne and Dolan	4.37	0.60	5.25	E-0.3	Standard	0.00		Rubbilize
GRANT	1650-01-79	61	STH 129 INT	Iverson	0.88	1.70	5.50	E-3	Standard	0.00	Dense	
IOWA	5970-02-72	39	BLUE MOUNDS BRIDGE	Iverson	0.56	1.88	2.00	E-0.3	Standard	0.00	Dense	
ROCK	5670-00-74	104	STH 104 INTERSECTION	Rock Road	1.31	1.20	5.00	E-3	Standard	0.00	Dense	
ROCK	5670-00-74	59	STH 104 INTERSECTION	Rock Road	1.31	1.20	5.00	E-3	Standard	0.00	Dense	

N/AV - Not Available

N/AP- Not Appplicable

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
Replacement												
North Central												
MARATHON	6600-01-80	153	EASTVIEW DR - ANDRYS LN	American Asphalt	5.02	0.59	5.25	E-1	Standard	4.50		Full Depth Mill
North West												
ST. CROIX	8070-08-76	63	STH 64 - NCL	Monarch Paving	10.08	0.66	6.00	E-10	Standard	3.50		Mill and Relay
South West												
RICHLAND	5112-06-61	131	VIOLA - NCL	D.L. Gasser	7.61	0.98	3.50	E-1	Standard	5.00		Mill and Relay
VERNON	5110-02-61	131	READSTOWN - VIOLA	D.L. Gasser	14.63	0.87	3.50	E-1	Standard	5.00		Mill and Relay

N/AV - Not Available

N/AP- Not Appplicable

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
Resurfacing												
North Central												
ADAMS	6140-00-84	13	GILLETTE DR - CTH E	D.L. Gasser	30.12	0.76	2.75	E-3	Standard	1.50		Existing PCC
LANGLADE	1602-11-60	45	SCL - STH 47	Northeast Asphalt	6.09	0.53	2.00	E-3	Standard	2.00		Existing AC
LINCOLN	9030-09-60	17	DUMP RD - NCL	American Asphalt	15.49	0.66	1.75	E-1	Standard	0.75		Existing AC
ONEIDA	9070-03-60	70	NCL - MORGAN RD	Pitlik and Wick	12.95	0.74	1.75	E-3	Standard	1.75		Existing AC
VILAS	1170-20-70	51	CTH M - CTH W	Northeast Asphalt	10.43	0.38	2.00	E-3	Standard	2.00		Existing AC
WAUPACA	6260-02-61	49	STH 161 - ANDERSON RD	American Asphalt	6.26	1.00	2.00	E-1	Standard	2.00		Existing AC
WAUSHARA	6320-05-70	73	3RD CT - CTH F	American Asphalt	13.20	0.73	2.00	E-3	Standard	2.00		Crack and Seat
WAUSHARA	6530-00-80	73	WHITE RIVER - STH 21	Northeast Asphalt	14.04	0.58	1.75	E-3	Standard	1.25		Existing AC
North East												
BROWN	9210-09-71	54	STH 172 - PLEASANT LANE	Northeast Asphalt	4.63	0.56	2.50	E-3	Standard	1.50		Existing AC
FOND DU LAC	3360-10-60	175	SCL - USH 151	Northeast Asphalt	14.07	0.70	2.00	E-1	Standard	2.00		Existing PCC
OCONTO	9190-19-60	32	BIG HILL RD - BOBCAT LN	Northeast Asphalt	5.97	0.45	2.00	E-3	Standard	2.00		Existing AC
SHEBOYGAN	4015-13-61	57	SCL - STH 32	Northeast Asphalt	54.46	0.75	2.00	E-10	Standard	0.00		Existing PCC
SHEBOYGAN	4540-21-71	32	STH 23 - N VILLAGE LIMITS	Northeast Asphalt	12.72	0.70	2.75	E-1	Standard	1.50		Existing AC
WINNEBAGO	6190-20-60	116	STH 91 - OMRO	Northeast Asphalt	8.02	0.76	2.00	E-1	Standard	2.00		Existing PCC

N/AV - Not Available

N/AP- Not Appplicable

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
North West												
BAYFIELD	1180-04-60	2	CTH E - USH 63	Northwoods Paving	13.44	0.71	2.00	E-10	Special	0.50		Existing PCC
BAYFIELD	1181-04-62	2	CTH G - ASHLAND CO LN	Northwoods Paving	4.93	1.07	2.00	E-3	Standard	0.00		Existing PCC
BAYFIELD	8160-14-71	13	7TH ST - OLD CTH K	Northwoods Paving	10.14	1.11	2.00	E-3	Standard	2.00		Existing AC
BUFFALO	7150-01-60	35	SCL - STH 54	Mathy Construction	1.55	1.18	3.25	Special	Special	1.50		Existing PCC
DUNN	1022-07-74	94	STH 128 - WILSON CRK BRDG	Monarch Paving	50.13	0.68	4.00	SMA	SMA	1.50		Existing PCC
DUNN	8640-02-61	79	STH 170 - STH 64	Monarch Paving	16.64	1.28	1.50	Special	Special	0.75		Existing AC
PEPIN	7180-01-61	35	ELM ST - NCL	Monarch Paving	0.45	0.83	2.75	Special	Special	2.75		Existing AC
PIERCE	1721-01-61	35	SCL - USH 63	Monarch Paving	24.82	0.54	3.00	E-3	Special	2.50		Existing AC
ST. CROIX	8070-09-71	63	USH 12W - STH 64	Monarch Paving	22.52	0.70	6.50	E-10	Special	3.50		Existing AC
South East												
WALWORTH	1320-04-61	11	IH 43 - STH 120	Stark Asphalt	11.68	0.96	2.50	E-3	Standard	2.50		Existing PCC
WAUKESHA	1090-19-70	43	STH 164 - MOORLAND RD	Payne and Dolan	22.92	0.79	7.00	E-30	Standard	3.00		Existing PCC
WAUKESHA	3110-05-70	59	OAKRIDGE DR - CTH X	Stark Asphalt	14.26	1.13	4.00	E-3	Standard	0.00		Crack and Seat

N/AV - Not Available

N/AP- Not Appplicable

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
South West												
COLUMBIA	5090-03-60	33	WCL - IH 90	D.L. Gasser	7.94	0.68	2.00	E-3	Standard	2.00		Existing AC
COLUMBIA	6707-00-62	146	CAMBRIA - STH 33	Northeast Asphalt	2.86	0.89	2.00	E-1	Standard	0.00		Existing AC
DANE	5845-05-71	51	CTH W - SPRING RD	Payne and Dolan	9.60	0.52	2.00	E-1	Standard	1.50		Existing AC
DANE	3671-00-61	134	USH 12 - CTH O	Rock Road	5.66	0.58	2.75	E-0.3	Standard	0.00		Existing AC
DODGE	3010-01-60	49	USH 41 - ROCK RIVER BR	Northeast Asphalt	25.52	0.62	2.00	E-3	Standard	2.00		Existing AC
IOWA	1204-05-60	18	CTH Z - CTH Y	Iverson	4.48	0.67	3.00	E-10	Standard	0.00		Existing PCC
JEFFERSON	3290-00-60	89	LAKE MILLS - WATERLOO	Rock Road	16.44	0.65	2.00	E-1	Standard	1.75		Existing AC
JUNEAU	5530-02-60	80	STH 33 - LIBERTY ST	D.L. Gasser	8.38	1.12	2.50	E-3	Standard	2.50		Existing AC
JUNEAU	5530-03-60	80	STH 82 - SCL NEW LISBON	D.L. Gasser	19.85	0.67	3.50	E-1	Standard	2.00		Existing AC
LA CROSSE	1071-07-77	90	STH 16 - CTH C	Mathy Construction	24.76	0.71	4.00	SMA	SMA	3.00		Existing PCC
MONROE	1023-06-63	94	CTH EW - STH 21	Mathy Construction	11.92	0.74	2.00	E-10	Standard	2.00		Existing PCC
ROCK	3663-00-61	67	STH 140 - SALTBOX RD	Rock Road	11.97	0.62	2.50	E-1	Standard	0.00		Existing AC

N/AV - Not Available

N/AP- Not Appplicable

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
Urban												
Reconstruction												
North Central												
MARATHON	6600-03-78	153	MAIN ST, ELDERON	American Asphalt	1.27	1.76	4.50	E-1	Standard	0.00	Dense	
South East												
MILWAUKEE	1030-20-72	43	MITCHELL INTERCHANGE	Payne and Dolan	31.39	0.90	2.00	E-30X	Standard	0.00		Existing AC
South West												
SAUK	1670-02-74	12	PHILLIPS BLVD, SAUK CITY	D.L. Gasser	7.61	1.49	6.00	E-10	Standard	0.00	Dense	

N/AV - Not Available

N/AP- Not Appplicable

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
Resurfacing												
North Central												
MARATHON	7040-00-60	98	CLARK ST, SPENCER	American Asphalt	1.89	1.68	2.00	E-1	Standard	0.00		Existing PCC
WAUPACA	6260-02-63	161	STH 49 - CTH J	American Asphalt	0.35	1.28	2.00	E-1	Standard	2.00		Existing AC
North East												
MANITOWOC	1500-28-71	10	VILLAGE OF REEDSVILLE	MCC	2.51	0.82	3.50	E-10	Standard	2.50		Existing AC
SHEBOYGAN	4570-08-71	42	PIGEON RIVER - NVL	Northeast Asphalt	1.70	0.90	5.00	E-1	Standard	2.00		Existing AC
WINNEBAGO	6190-23-60	116	MAIN ST, WINNECONNE	Northeast Asphalt	3.05	1.44	2.00	E-3	Standard	2.00		Existing PCC
North West												
BARRON	8824-10-71	25	USH 8 - 15TH AVE	Monarch Paving	3.93	0.93	4.50	E-3	Special	4.00		Existing AC
EAU CLAIRE	1022-08-77	94	STH 312 - STH 37	Rock Road	15.80	0.84	4.50	E-10	Standard	3.50		Existing PCC
JACKSON	7540-03-70	12	IH 94 - STH 54	Mathy Construction	6.79	1.52	2.50	E-10	Standard	1.10		Existing PCC
JACKSON	7550-03-72	54	11TH ST - USH 12	Mathy Construction	1.70	1.53	2.50	E-10	Standard	0.00		Existing PCC
South East												
MILWAUKEE	1060-33-90	181	ADLER ST - BLUE MOUND RD	Stark Asphalt	2.19	2.51	4.00	E-3	Standard	4.00		Existing PCC
MILWAUKEE	1060-45-70	94	STADIUM IC - JACKSON ST	Payne and Dolan	10.43	1.05	2.00	E-30	Standard	2.00		Existing AC
WAUKESHA	2320-10-70	100	USH 41/45 - 124TH ST	Payne and Dolan	7.50	1.27	4.00	E-3	Standard	0.00		Existing PCC

N/AV - Not Available

N/AP- Not Appplicable

AC by Project Summary

For Year: 2013

County	Project ID	Hwy	General Location	Contractor	Length	Wt. IRI	Pavement Thickness	Hv Mv Lv	Pavement Classification	Mill Depth	New Base	Paved Over
South West												
Dane	1010-00-72	39	LIEN RD - USH 51	Payne and Dolan	31.05	0.69	3.50	Warrant	AC Warranty	0.00		Existing PCC
JEFFERSON	3050-02-62	19	RR BRIDGE - JACKSON ST	Rock Road	1.42	1.93	2.00	E-1	Standard	2.00		Existing PCC
LA CROSSE	7575-01-60	16	GILLETTTE ST - STH 157	Mathy Construction	3.39	1.23	1.75	E-30	Standard	0.00		Existing PCC
LA CROSSE	7575-01-61	16	STH 157 - KINNEY COULEE R	Mathy Construction	4.00	1.45	1.75	E-30	Standard	0.00		Existing PCC
VERNON	5731-02-60	056	STH 131 - STH 131	D.L. Gasser	0.76	1.59	3.50	E-1	Standard	3.50		Existing AC
Report Totals:					**788.60**	**0.79**						

N/AV - Not Available

N/AP- Not Appplicable

AC by Pavement Year / Construction Category

Constr. Category		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
SMA	Rural	2	74.89	0.69
Special	Rural	9	90.08	0.78
Standard	Rural	42	484.90	0.74
		53	**649.87**	**0.74**
AC Warranty	Urban	1	31.05	0.69
Special	Urban	1	3.93	0.93
Standard	Urban	18	103.75	1.15
		20	**138.73**	**1.04**
Totals for Pavement Year: 2013		**73**	**788.60**	**0.79**

Report Totals:

73	**788.60**	

AC by Pavement Year / Contractor

Contractor		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
American Asphalt	Rural	5	54.24	0.66
D.L. Gasser	Rural	6	88.53	0.80
Iverson	Rural	3	5.92	0.94
Mathy Construction	Rural	3	38.22	0.74
Monarch Paving	Rural	9	135.31	0.74
Northeast Asphalt	Rural	11	158.80	0.66
Northwoods Paving	Rural	3	28.51	0.91
Payne and Dolan	Rural	5	64.78	0.71
Pitlik and Wick	Rural	1	12.95	0.74
Rock Road	Rural	5	36.68	0.67
Stark Asphalt	Rural	2	25.94	1.05
		53	**649.87**	**0.74**
American Asphalt	Urban	3	3.51	1.67
D.L. Gasser	Urban	2	8.37	1.50
Mathy Construction	Urban	4	15.88	1.44
MCC	Urban	1	2.51	0.82
Monarch Paving	Urban	1	3.93	0.93
Northeast Asphalt	Urban	2	4.75	1.25
Payne and Dolan	Urban	4	80.37	0.87
Rock Road	Urban	2	17.23	0.93
Stark Asphalt	Urban	1	2.19	2.51
		20	**138.73**	**1.04**
Totals for Pavement Year: 2013		**73**	**788.60**	**0.79**

Report Totals:

		73	**788.60**	

AC by Pavement Year / County

County		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
ADAMS	Rural	1	30.12	0.76
BAYFIELD	Rural	3	28.51	0.91
BROWN	Rural	1	4.63	0.56
BUFFALO	Rural	1	1.55	1.18
COLUMBIA	Rural	2	10.80	0.73
DANE	Rural	3	19.62	0.55
DODGE	Rural	1	25.52	0.62
DUNN	Rural	2	66.77	0.83
FOND DU LAC	Rural	1	14.07	0.70
GRANT	Rural	1	0.88	1.70
IOWA	Rural	2	5.04	0.80
JEFFERSON	Rural	1	16.44	0.65
JUNEAU	Rural	2	28.23	0.81
LA CROSSE	Rural	1	24.76	0.71
LANGLADE	Rural	1	6.09	0.53
LINCOLN	Rural	1	15.49	0.66
MARATHON	Rural	2	19.30	0.50
MONROE	Rural	1	11.92	0.74
OCONTO	Rural	1	5.97	0.45
ONEIDA	Rural	1	12.95	0.74
PEPIN	Rural	1	0.45	0.83
PIERCE	Rural	1	24.82	0.54
RICHLAND	Rural	1	7.61	0.98
ROCK	Rural	3	14.58	0.72
SHEBOYGAN	Rural	2	67.17	0.74
ST. CROIX	Rural	5	43.27	0.70
VERNON	Rural	1	14.63	0.87
VILAS	Rural	1	10.43	0.38
WALWORTH	Rural	1	11.68	0.96
WAUKESHA	Rural	4	65.07	0.84

AC by Pavement Year / County

County		Projects #	Length (mi)	Wt. IRI
WAUPACA	Rural	1	6.26	1.00
WAUSHARA	Rural	2	27.24	0.65
WINNEBAGO	Rural	1	8.02	0.76
		53	**649.87**	**0.74**
BARRON	Urban	1	3.93	0.93
Dane	Urban	1	31.05	0.69
EAU CLAIRE	Urban	1	15.80	0.84
JACKSON	Urban	2	8.48	1.52
JEFFERSON	Urban	1	1.42	1.93
LA CROSSE	Urban	2	7.40	1.35
MANITOWOC	Urban	1	2.51	0.82
MARATHON	Urban	2	3.16	1.71
MILWAUKEE	Urban	3	44.01	1.02
SAUK	Urban	1	7.61	1.49
SHEBOYGAN	Urban	1	1.70	0.90
VERNON	Urban	1	0.76	1.59
WAUKESHA	Urban	1	7.50	1.27
WAUPACA	Urban	1	0.35	1.28
WINNEBAGO	Urban	1	3.05	1.44
		20	**138.73**	**1.04**
Totals for Pavement Year: 2013		**73**	**788.60**	**0.79**

Report Totals:

73	**788.60**	

AC by Pavement Year / Location / Construction Category

	Location	Constr. Category	Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013					
	Rural				
		Resurfacing	38	551.28	0.74
		Replacement	4	37.34	0.80
		Reconstruction	11	61.26	0.71
			53	**649.88**	**0.74**
	Urban				
		Resurfacing	17	98.46	1.04
		Reconstruction	3	40.26	1.04
			20	**138.72**	**1.04**
	Totals for Pavement Year: 2013		**73**	**788.60**	**0.79**
Report Totals:			**73**	**788.60**	

AC by Pavement Year / Mill Depth

Mill Depth (in.)		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
0.00	Rural	17	145.87	0.77
0.50	Rural	1	13.44	0.71
0.75	Rural	2	32.12	0.98
1.25	Rural	1	14.04	0.58
1.50	Rural	6	108.75	0.69
1.75	Rural	2	29.39	0.69
2.00	Rural	12	139.40	0.69
2.50	Rural	3	44.88	0.76
2.75	Rural	1	0.45	0.83
3.00	Rural	3	61.68	0.74
3.50	Rural	2	32.60	0.69
4.50	Rural	1	5.02	0.59
5.00	Rural	2	22.24	0.91
		53	**649.88**	**0.74**
0.00	Urban	9	89.80	0.99
1.10	Urban	1	6.79	1.52
2.00	Urban	5	16.95	1.18
2.50	Urban	1	2.51	0.82
3.50	Urban	2	16.56	0.87
4.00	Urban	2	6.11	1.49
		20	**138.72**	**1.04**
Totals for Pavement Year: 2013		**73**	**788.60**	**0.79**

Report Totals:

		73	**788.60**	

AC by Pavement Year / Mix Type

Mix Type		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
E-0.3	Rural	3	10.58	0.66
E-1	Rural	13	144.52	0.72
E-10	Rural	9	127.56	0.73
E-3	Rural	19	208.60	0.74
E-30	Rural	4	65.09	0.69
SMA	Rural	2	74.89	0.69
Special	Rural	3	18.64	1.26
		53	**649.88**	**0.74**
E-1	Urban	6	7.39	1.54
E-10	Urban	5	34.40	1.15
E-3	Urban	4	16.67	1.38
E-30	Urban	3	17.83	1.18
E-30X	Urban	1	31.39	0.90
Warranty	Urban	1	31.05	0.69
		20	**138.73**	**1.04**
Totals for Pavement Year: 2013		**73**	**788.61**	**0.79**

Report Totals:

73	**788.61**	

AC by Pavement Year / New Base

	Dense - Open		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013					
	Dense	Rural	5	5.03	1.51
			5	**5.03**	**1.51**
	Dense	Urban	2	8.87	1.53
			2	**8.87**	**1.53**
Totals for Pavement Year: 2013			**7**	**13.90**	**1.52**
Report Totals:			**7**	**13.90**	

AC by Pavement Year / Paved Over

Paved Over		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
Crack and Sea	Rural	2	27.46	0.94
Existing AC	Rural	23	271.34	0.70
Existing PCC	Rural	13	252.48	0.75
Full Depth Mill	Rural	1	5.02	0.59
Mill and Relay	Rural	5	42.01	0.79
Rubbilize	Rural	4	46.53	0.64
		48	**644.84**	**0.73**
Existing AC	Urban	7	51.06	0.94
Existing PCC	Urban	11	78.79	1.05
		18	**129.85**	**1.01**
Totals for Pavement Year: 2013		**66**	**774.69**	**0.78**
Report Totals:		**66**	**774.69**	

AC by Pavement Year / Pavement Thickness

Thickness (in.)		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
1.50	Rural	1	16.64	1.28
1.75	Rural	3	42.47	0.65
2.00	Rural	18	221.83	0.71
2.50	Rural	4	36.66	0.83
2.75	Rural	4	48.95	0.72
3.00	Rural	2	29.30	0.56
3.25	Rural	1	1.55	1.18
3.50	Rural	3	42.09	0.80
4.00	Rural	3	89.15	0.76
5.00	Rural	2	2.62	1.20
5.25	Rural	2	9.39	0.60
5.50	Rural	1	0.88	1.70
6.00	Rural	1	10.08	0.66
6.25	Rural	1	14.28	0.46
6.50	Rural	1	22.52	0.70
7.00	Rural	2	36.81	0.77
7.25	Rural	2	9.70	0.64
7.75	Rural	1	14.00	0.71
8.00	Rural	1	0.97	1.99
		53	**649.89**	**0.74**
1.75	Urban	2	7.40	1.35
2.00	Urban	6	48.54	1.03
2.50	Urban	2	8.48	1.52
3.50	Urban	3	34.31	0.72
4.00	Urban	2	9.69	1.55
4.50	Urban	3	21.00	0.91
5.00	Urban	1	1.70	0.90
6.00	Urban	1	7.61	1.49
		20	**138.73**	**1.04**
Totals for Pavement Year: 2013		**73**	**788.62**	**0.79**
Report Totals:		**73**	**788.62**	

AC by Pavement Year / WisDOT Region / Construction Category

Region	Constr. Category	Projects #	Lane(mi)	Wt. IRI
Pavement Year: 2013				
Rural				
North Central				
	Reconstruction	1	14.28	0.46
	Replacement	1	5.02	0.59
	Resurfacing	8	108.58	0.67
		10	**127.88**	**0.65**
North East				
	Resurfacing	6	99.86	0.65
		6	**99.86**	**0.71**
North West				
	Reconstruction	3	10.66	1.12
	Replacement	1	10.08	0.66
	Resurfacing	9	144.62	0.90
		13	**165.36**	**0.77**
South East				
	Reconstruction	2	27.89	0.73
	Resurfacing	3	48.86	0.96
		5	**76.75**	**0.86**
South West				
	Reconstruction	5	8.43	1.32
	Replacement	2	22.24	0.93
	Resurfacing	12	149.36	0.71
		19	**180.03**	**0.73**
		53	**649.88**	**0.74**
Urban				
North Central				
	Reconstruction	1	1.27	1.76
	Resurfacing	2	2.25	1.48
		3	**3.52**	**1.67**
North East				
	Resurfacing	3	7.26	1.05
		3	**7.26**	**1.10**
North West				
	Resurfacing	4	28.22	1.21
		4	**28.22**	**1.06**

AC by Pavement Year / WisDOT Region / Construction Category

Region	Constr. Category	Projects #	Lane(mi)	Wt. IRI
South East				
	Reconstruction	1	31.39	0.90
	Resurfacing	3	20.12	1.61
		4	**51.51**	**1.05**
South West				
	Reconstruction	1	7.61	1.49
	Resurfacing	5	40.63	1.38
		6	**48.24**	**0.97**
		20	**138.75**	**1.04**
Totals for Pavement Year: 2013		**73**	**788.63**	**0.79**
Report Totals:		**73**	**788.63**	

AC by Pavement Year / WisDOT Region

	WisDOT Region		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013					
	North Central	Rural	10	127.87	0.65
	North East	Rural	6	99.86	0.71
	North West	Rural	13	165.36	0.77
	South East	Rural	5	76.75	0.86
	South West	Rural	19	180.02	0.73
			53	**649.86**	**0.74**
	North Central	Urban	3	3.51	1.67
	North East	Urban	3	7.26	1.10
	North West	Urban	4	28.22	1.06
	South East	Urban	4	51.51	1.05
	South West	Urban	6	48.23	0.97
			20	**138.73**	**1.04**
Totals for Pavement Year: 2013			**73**	**788.59**	**0.79**

Report Totals:

			73	**788.59**	

PCC by Pavement Year / Location / Construction Category

	Location	Constr. Category	Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013					
	Rural				
		Reconstruction	5	41.26	1.60
			5	**41.26**	**1.60**
	Urban				
		Reconstruction	12	122.89	1.59
			12	**122.89**	**1.59**
Totals for Pavement Year: 2013			**17**	**164.15**	**1.59**
Report Totals:			**17**	**164.15**	

PCC by Pavement Year / Contractor

Contractor		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
Chippewa Concrete	Rural	2	12.12	1.43
Trierweiler Construction	Rural	2	11.31	1.65
Zignego Co Inc	Rural	1	17.82	1.68
		5	**41.25**	**1.60**
Chippewa Concrete	Urban	2	8.76	1.51
Michels	Urban	2	60.13	1.53
Parisi	Urban	1	0.82	2.41
Trierweiler Construction	Urban	3	41.53	1.55
Wis. Constructor's	Urban	1	8.75	1.77
Zignego Co Inc	Urban	3	2.91	2.77
		12	**122.90**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.15**	**1.59**

Report Totals:

		17	**164.15**

PCC by Pavement Year / County

County		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
DANE	Rural	1	0.77	2.80
DUNN	Rural	1	2.06	1.53
EAU CLAIRE	Rural	1	17.82	1.68
ROCK	Rural	1	10.55	1.56
ST. CROIX	Rural	1	10.06	1.41
		5	**41.26**	**1.60**
DODGE	Urban	1	0.82	2.41
DOUGLAS	Urban	1	2.10	1.98
EAU CLAIRE	Urban	1	6.67	1.36
MILWAUKEE	Urban	4	11.66	2.02
WINNEBAGO	Urban	5	101.66	1.54
		12	**122.91**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.17**	**1.59**

Report Totals:

		17	**164.17**	

PCC by Pavement Year/Dowell Placement

	Dowel Placement		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013					
	Inserted	Rural	5	41.26	1.60
			5	**41.26**	**1.60**
	Basket	Urban	5	5.82	2.43
	Inserted	Urban	7	117.07	1.54
			12	**122.89**	**1.59**
Totals for Pavement Year: 2013			**17**	**164.15**	**1.59**
Report Totals:			**17**	**164.15**	

PCC by Pavement Year / Joint Angle

	Joint Angle		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013					
	Normal	Rural	5	41.26	1.60
			5	**41.26**	**1.60**
	Normal	Urban	12	122.89	1.59
			12	**122.89**	**1.59**
Totals for Pavement Year: 2013			**17**	**164.15**	**1.59**
Report Totals:			**17**	**164.15**	

PCC by Pavement Year / Longitudinal Joint

Joint Type		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
Sawed	Rural	5	41.26	1.60
		5	**41.26**	**1.60**
Sawed	Urban	12	122.89	1.59
		12	**122.89**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.15**	**1.59**

Report Totals:

17	**164.15**	

PCC by Pavement Year / New Base

	Dense - Open		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013					
	Dense	Rural	5	41.26	1.60
			5	**41.26**	**1.60**
	Dense	Urban	12	122.89	1.59
			12	**122.89**	**1.59**
Totals for Pavement Year: 2013			**17**	**164.15**	**1.59**
Report Totals:			**17**	**164.15**	

PCC by Pavement Year / Pavement Classification

Pavement Classification		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
Special	Rural	3	29.95	1.58
		3	**29.95**	**1.58**
Special	Urban	2	8.76	1.51
		2	**8.76**	**1.51**
Standard	Rural	2	11.31	1.65
		2	**11.31**	**1.65**
Standard	Urban	10	114.13	1.59
		10	**114.13**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.15**	**1.59**

Report Totals:

17	**164.15**	

PCC by Pavement Year / Pavement Thickness

Thickness (in.)		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
9.50	Rural	2	11.31	1.65
12.00	Rural	2	19.89	1.66
13.00	Rural	1	10.06	1.41
		5	**41.26**	**1.60**
8.00	Urban	1	0.71	3.60
9.00	Urban	3	3.02	2.47
9.50	Urban	1	8.75	1.77
10.00	Urban	1	2.10	1.98
11.00	Urban	5	101.66	1.54
12.00	Urban	1	6.67	1.36
		12	**122.91**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.17**	**1.59**
Report Totals:		**17**	**164.17**	

PCC by Project Summary For Year: 2013

Region / County	Project ID	Hwy	General Location	Contractor	Length (mi)	(wt) IRI	Thick.	Joint Angle	Slab Length	Center	Pavement Classification	Basket or Insertion	Base
Rural													
Reconstruction													
North West													
DUNN	1022-00-73	94	RED CEDAR RIVER BRIDGE	Chippewa Concrete	2.06	1.53	12.00	Normal	15	Sawed	Special	Inserted	Dense
EAU CLAIRE	1022-00-77	94	MALLARD RD - CTH NN	Zignego Co Inc	17.82	1.68	12.00	Normal	15	Sawed	Special	Inserted	Dense
ST. CROIX	1020-07-74	94	STH 65 INTERCHANGE	Chippewa Concrete	10.06	1.41	13.00	Normal	15	Sawed	Special	Inserted	Dense
South West													
DANE	6020-02-71	51	REARDON RD - VINBURN RD	Trierweiler Construction	0.77	2.80	9.50	Normal	15	Sawed	Standard	Inserted	Dense
ROCK	1390-04-79	26	TOWNLINE RD - CTH N	Trierweiler Construction	10.55	1.56	9.50	Normal	15	Sawed	Standard	Inserted	Dense
Urban													
Reconstruction													
North East													
WINNEBAGO	1120-09-71	41	USH 45 - BREEZEWOOD LN	Michels	44.28	1.49	11.00	Normal	15	Sawed	Standard	Inserted	Dense
WINNEBAGO	1120-10-73	41	STH 44 - WITZEL AVE	Trierweiler Construction	19.11	1.48	11.00	Normal	15	Sawed	Standard	Inserted	Dense
WINNEBAGO	1120-10-80	41	STH 26 - STH 44	Michels	15.85	1.63	11.00	Normal	15	Sawed	Standard	Inserted	Dense
WINNEBAGO	1120-11-75	41	STH 21 - USH 45	Trierweiler Construction	12.08	1.62	11.00	Normal	15	Sawed	Standard	Inserted	Dense
WINNEBAGO	1120-11-83	41	USH 45 INTERCHANGE	Trierweiler Construction	10.34	1.60	11.00	Normal	15	Sawed	Standard	Inserted	Dense
North West													
DOUGLAS	1195-13-71	35	BELKNAP ST - 3RD ST	Chippewa Concrete	2.10	1.98	10.00	Normal	15	Sawed	Special	Basket	Dense
EAU CLAIRE	1024-00-70	94	CTH E & CTH C BRIDGES	Chippewa Concrete	6.67	1.36	12.00	Normal	15	Sawed	Special	Inserted	Dense
South East													

N/A = No Dowels Were placed by Basket or Insertion on these projects

PCC by Project Summary For Year: 2013

Region / County	Project ID	Hwy	General Location	Contractor	Length (mi)	(wt) IRI	Thick.	Joint Angle	Slab Length	Center	Pavement Classification	Basket or Insertion	Base
MILWAUKEE	1030-20-78	119	AIRPORT SPUR	Wis. Constructor's	8.75	1.77	9.50	Normal	15	Sawed	Standard	Inserted	Dense
MILWAUKEE	1060-33-71	181	USH 18 - WISCONSIN AVE	Zignego Co Inc	0.71	3.60	8.00	Normal	15	Sawed	Standard	Basket	Dense
MILWAUKEE	1060-33-77	59	101ST ST - 97TH ST	Zignego Co Inc	1.10	2.48	9.00	Normal	15	Sawed	Standard	Basket	Dense
MILWAUKEE	2230-15-70	59	106TH ST - 101ST	Zignego Co Inc	1.10	2.51	9.00	Normal	15	Sawed	Standard	Basket	Dense
South West													
DODGE	6083-00-75	33	PARK AVE, BEAVER DAM	Parisi	0.82	2.41	9.00	Normal	15	Sawed	Standard	Basket	Dense

N/A = No Dowels Were placed by Basket or Insertion on these projects

PCC by Pavement Year / WisDOT Region / Construction Category

Region	Constr. Category	Projects #	Lane Miles	Wt. IRI
Pavement Year: 2013				
Rural				
North West				
	Reconstruction	3	29.95	1.58
South West				
	Reconstruction	2	11.31	1.65
		5	**41.26**	**1.60**
Urban				
North East				
	Reconstruction	5	101.66	1.54
North West				
	Reconstruction	2	8.76	1.51
South East				
	Reconstruction	4	11.66	2.02
South West				
	Reconstruction	1	0.82	2.41
		12	**122.90**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.16**	**1.59**
Report Totals:		**17**	**164.16**	

PCC by Pavement Year / Slab Length

Slab Length (ft)		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
15	Rural	5	41.26	1.60
		5	**41.26**	**1.60**
15	Urban	12	122.89	1.59
		12	**122.89**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.15**	**1.59**
Report Totals:		**17**	**164.15**	

PCC by Pavement Year / WisDOT Region

WisDOT Region		Projects #	Length (mi)	Wt. IRI
Pavement Year: 2013				
North West	Rural	3	29.95	1.58
South West	Rural	2	11.31	1.65
		5	**41.26**	**1.60**
North East	Urban	5	101.66	1.54
North West	Urban	2	8.76	1.51
South East	Urban	4	11.66	2.02
South West	Urban	1	0.82	2.41
		12	**122.90**	**1.59**
Totals for Pavement Year: 2013		**17**	**164.16**	**1.59**

Report Totals:

		17	**164.16**

Ride Measurements
Project Data
10 Year Average
by

PAVEMENT TYPE

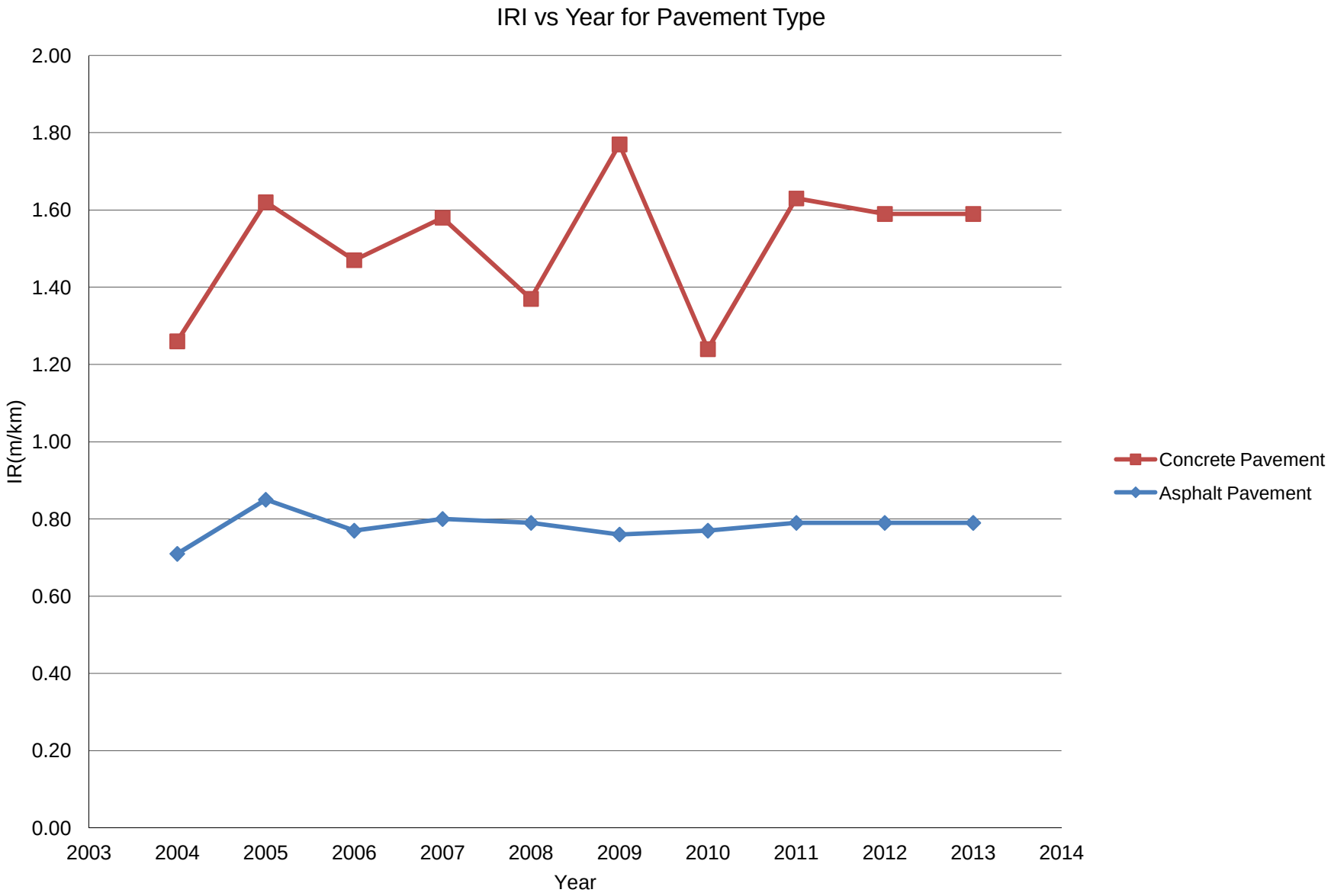
(New Surfaces Only)

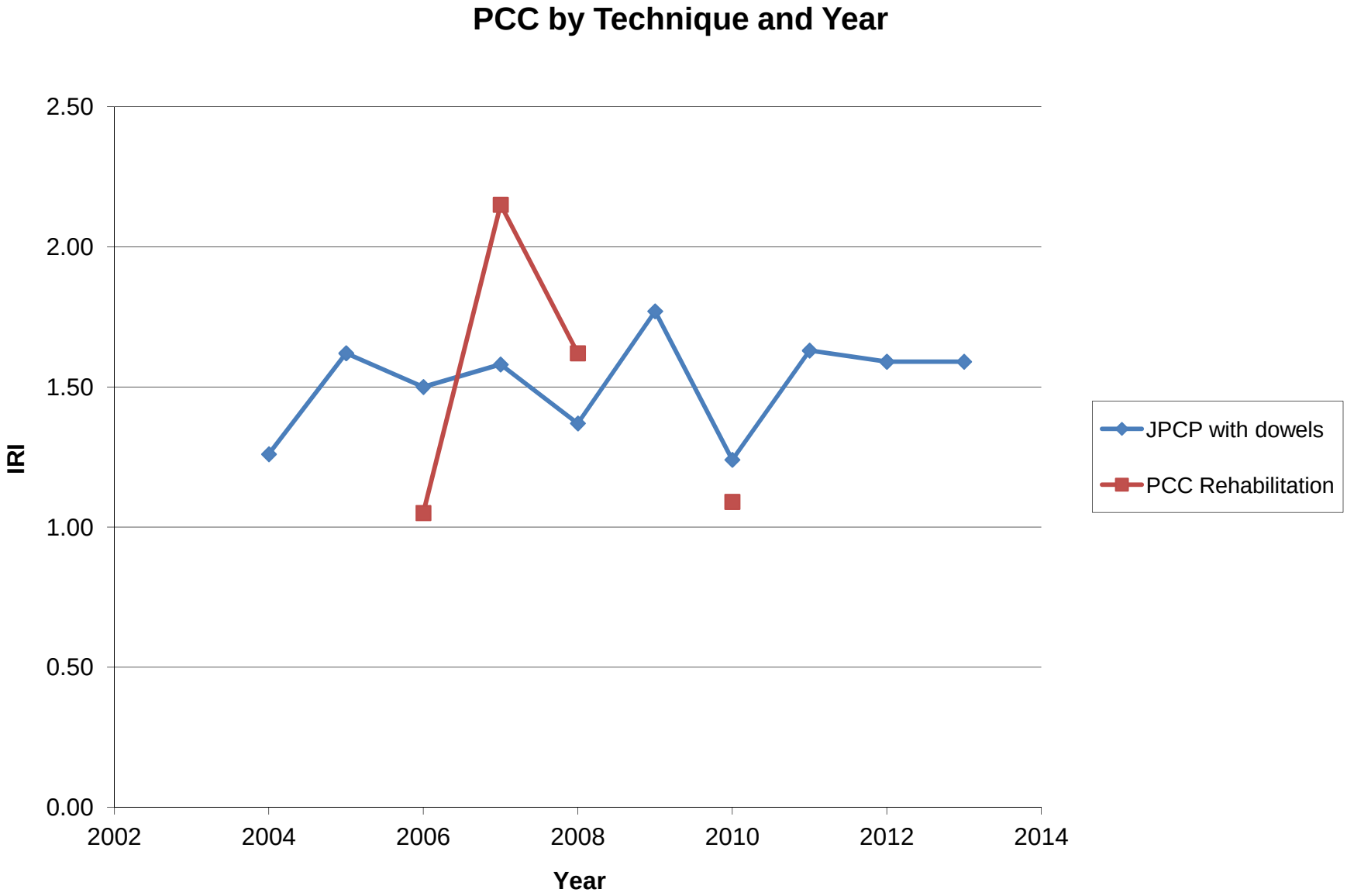
PORTLAND CEMENT CONCRETE PAVEMENTS

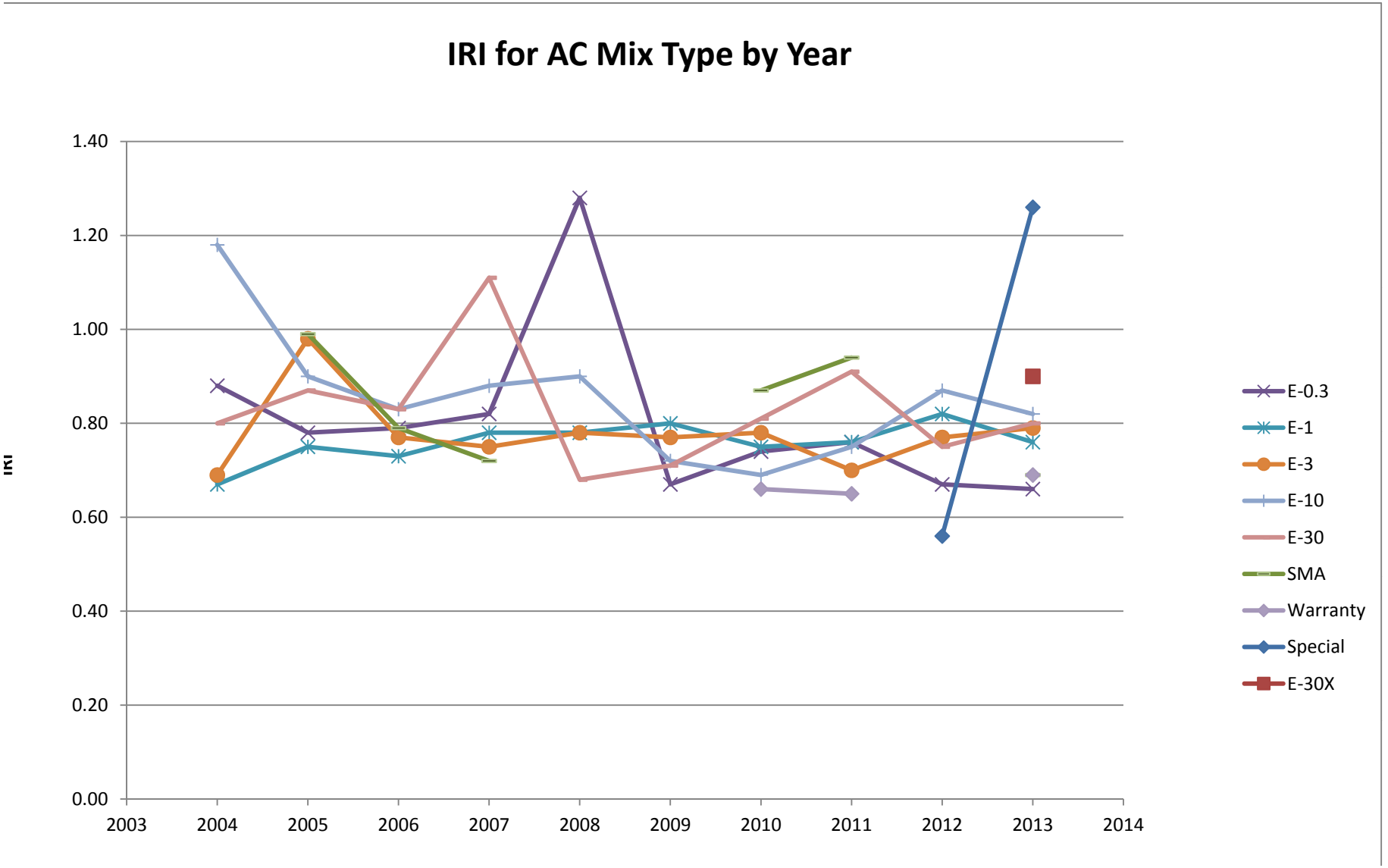
Construction Year	Total Miles	Average IRI
2004	174.39	1.26
2005	225.87	1.62
2006	142.60	1.47
2007	20.30	1.58
2008	148.53	1.37
2009	9.5	1.77
2010	23.18	1.24
2011	62.77	1.63
2012	146.47	1.59
2013	164.17	1.59
10-Year Average	111.78	1.51

ASPHALTIC CONCRETE PAVEMENTS

Construction Year	Total Miles	Average IRI
2004	960.58	0.71
2005	733.94	0.85
2006	810.26	0.77
2007	707.35	0.80
2008	1381.52	0.79
2009	1113.54	0.76
2010	1208.94	0.77
2011	914.07	0.79
2012	540.15	0.79
2013	788.6	0.79
10-Year Average	915.90	0.78


IRI vs Year for Pavement Type
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
IR(m/km)
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
Concrete Pavement
Asphalt Pavement


PCC by Technique and Year
2.50
2.00
1.50
1.00
0.50
0.00
IRI
2002
2004
2006
2008
2010
2012
2014
Year
JPCP with dowels
PCC Rehabilitation

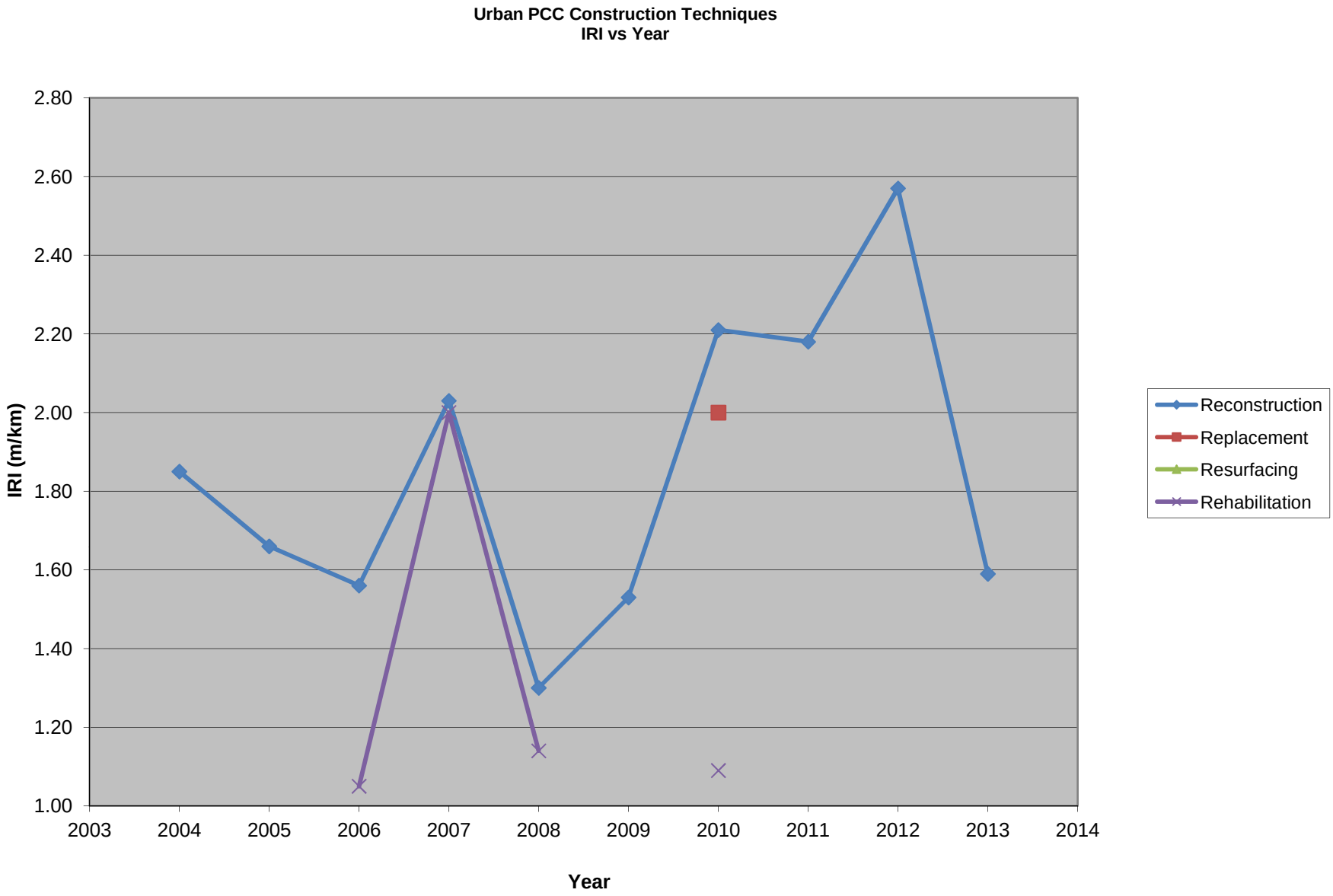

IRI for AC Mix Type by Year
IRI
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
E-0.3
E-1
E-3
E-10
E-30
SMA
Warranty
Special
E-30X

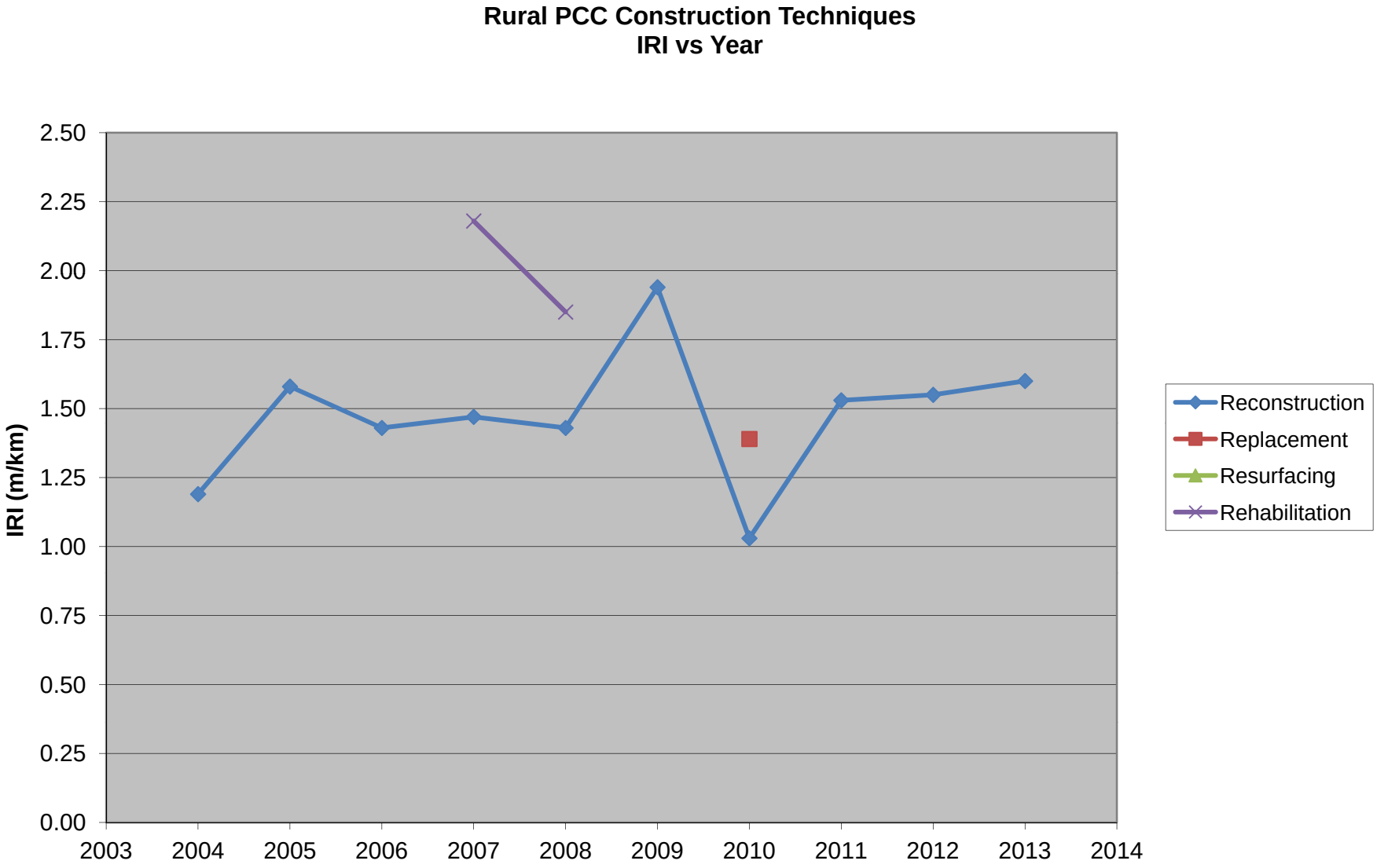
PORTLAND CEMENT CONCRETE PAVEMENTS

	2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		10 Year Total	10 Year Average
Type	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI
JPCP with dowels	174.38	1.26	225.86	1.62	134.49	1.50	20.30	1.58	148.53	1.37	9.50	1.77	23.18	1.24	62.77	1.63	146.47	1.59	164.17	1.59	1109.65	1.50
PCC Rehabilitation					8.11	1.05	29.69	2.15	84.34	1.62			24.51	1.09							146.65	1.61
PCC overlays:																						
bonded																						
unbonded																						
whitetopping																						
ultra-thin whitetopping																						
TOTAL	**174.38**	**1.26**	**225.86**	**1.62**	**142.60**	**1.47**	**49.99**	**1.92**	**232.87**	**1.46**	**9.50**	**1.77**	**47.69**	**1.16**	**62.77**	**1.63**	**146.47**	**1.59**	**164.17**	**1.59**	**1256.30**	**1.51**

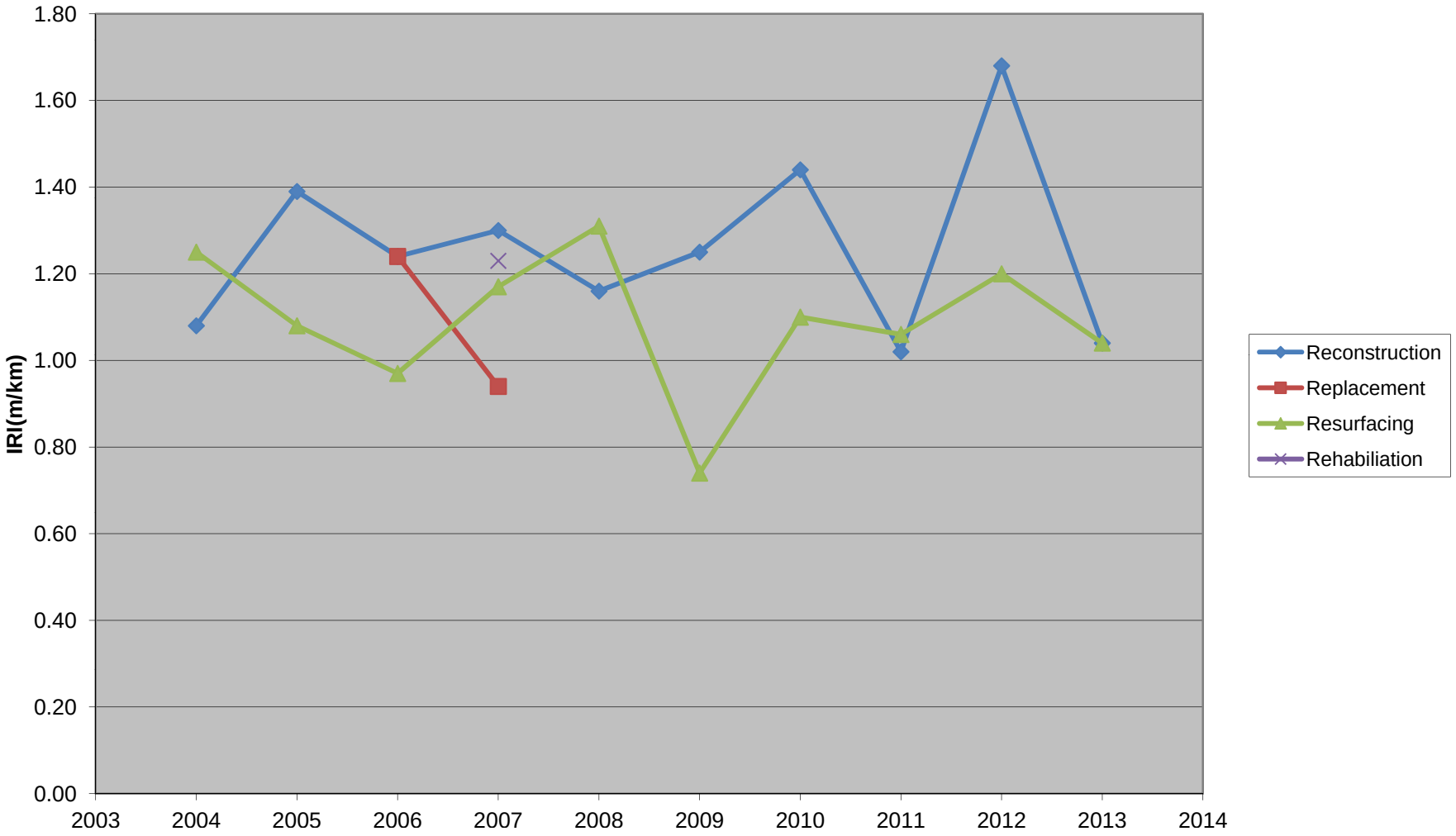
ASPHALTIC CONCRETE PAVEMENTS

	2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		10 Year Totals	10 Year Averages
Type	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI
E-0.3	75.62	0.88	115.56	0.78	49.55	0.79	21.82	0.82	19.01	1.28	50.18	0.67	65.16	0.74	71.32	0.76	66.97	0.67	10.58	0.66	545.77	0.78
E-1	350.87	0.67	268.96	0.75	309.24	0.73	163.38	0.78	372.01	0.78	330.29	0.80	282.86	0.75	174.09	0.76	132.67	0.82	151.91	0.76	2536.28	0.75
E-3	463.68	0.69	199.27	0.98	320.55	0.77	298.74	0.75	668.38	0.78	402.62	0.77	365.49	0.78	309.58	0.70	150.98	0.77	225.27	0.79	3404.56	0.77
E-10	24.70	1.18	46.71	0.90	77.99	0.83	178.82	0.88	192.90	0.90	100.77	0.72	202.03	0.69	49.38	0.75	116.07	0.87	161.96	0.82	1151.33	0.82
E-30	45.70	0.80	75.08	0.87	30.73	0.83	8.49	1.11	129.22	0.68	229.68	0.71	62.09	0.81	137.40	0.91	70.84	0.75	82.92	0.80	872.15	0.78
E-30X																			31.39	0.90	31.39	0.90
SMA			28.35	0.99	22.18	0.79	36.11	0.72					196.77	0.87	156.19	0.94			74.89	0.69	514.49	0.86
Special																	2.62	0.56	18.64	1.26	21.26	1.17
Warranty													34.55	0.66	15.32	0.65			31.05	0.69	80.92	0.67
TOTAL	**960.57**	**0.72**	**733.93**	**0.85**	**810.24**	**0.76**	**707.36**	**0.79**	**1381.52**	**0.79**	**1113.54**	**0.76**	**1208.95**	**0.75**	**913.28**	**0.78**	**540.15**	**0.79**	**788.61**	**0.79**	**9158.15**	**0.78**

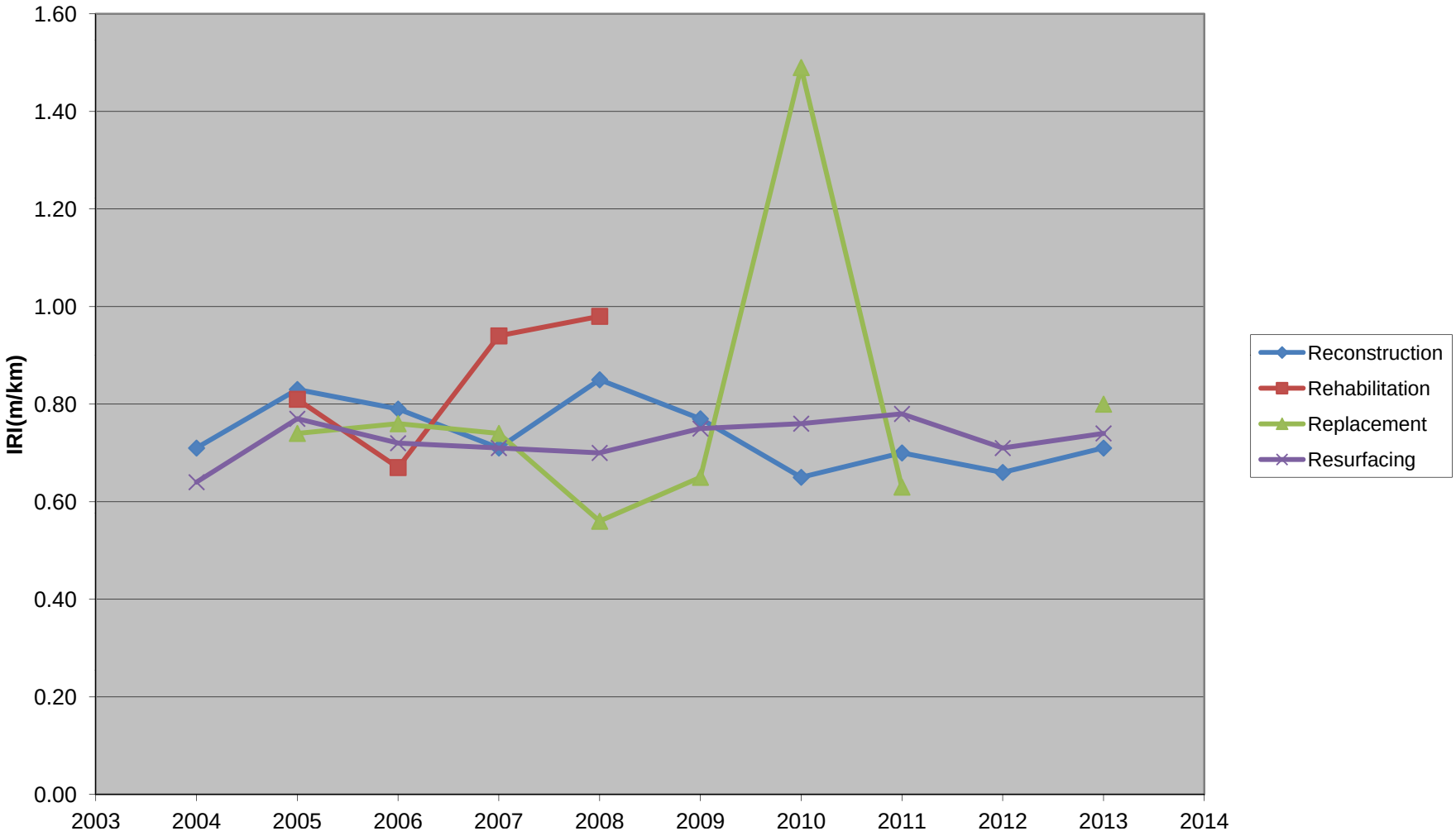

Urban PCC Construction Techniques
IRI vs Year
IRI (m/km)
2.80
2.60
2.40
2.20
2.00
1.80
1.60
1.40
1.20
1.00
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
Reconstruction
Replacement
Resurfacing
Rehabilitation


Rural PCC Construction Techniques
IRI vs Year
IRI (m/km)
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Reconstruction
Replacement
Resurfacing
Rehabilitation

Urban AC Construction Techniques by Year



Rural AC Construction Techniques by Year



Location and Construction Method

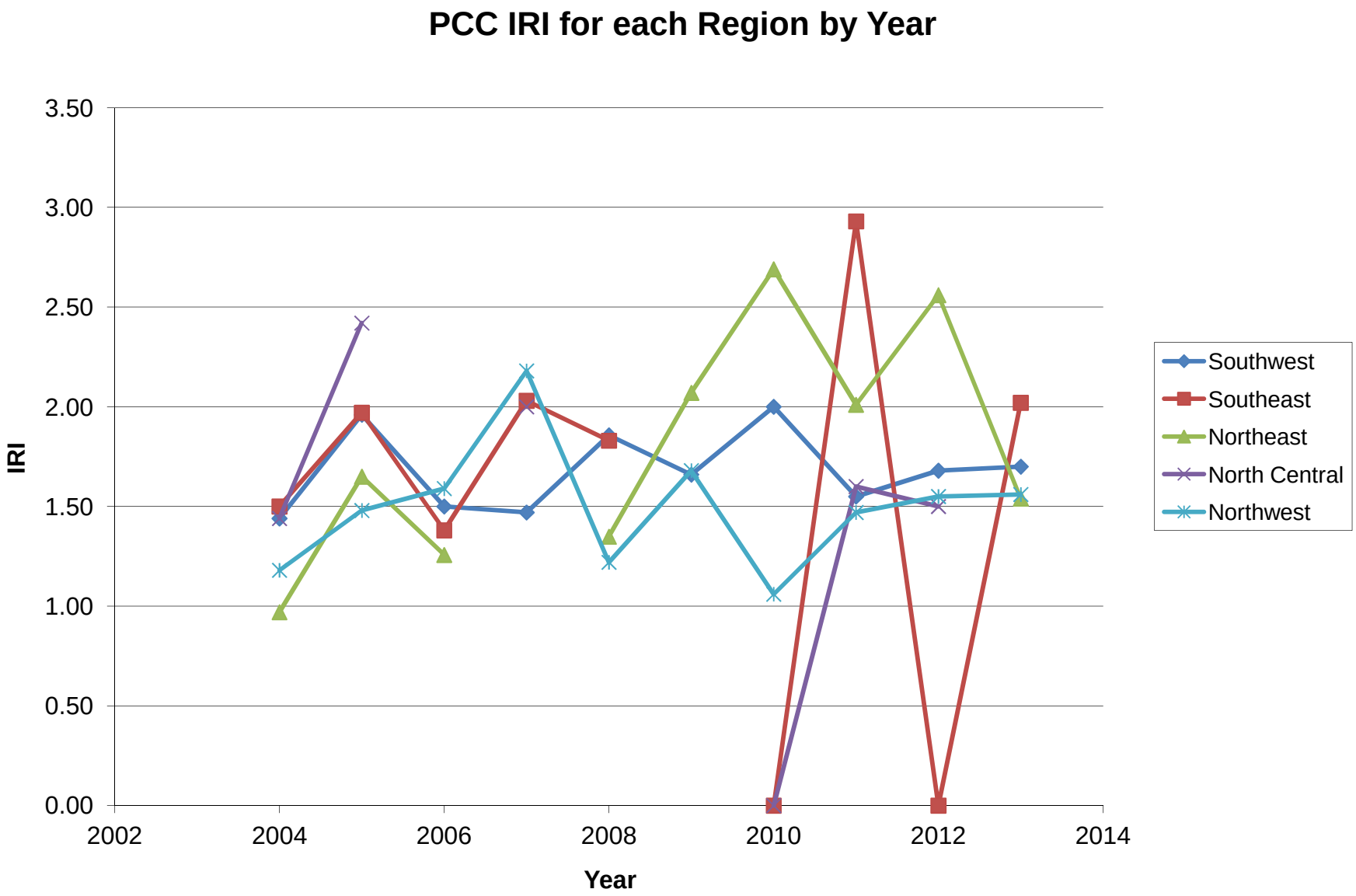
PCC CONCRETE PAVEMENT

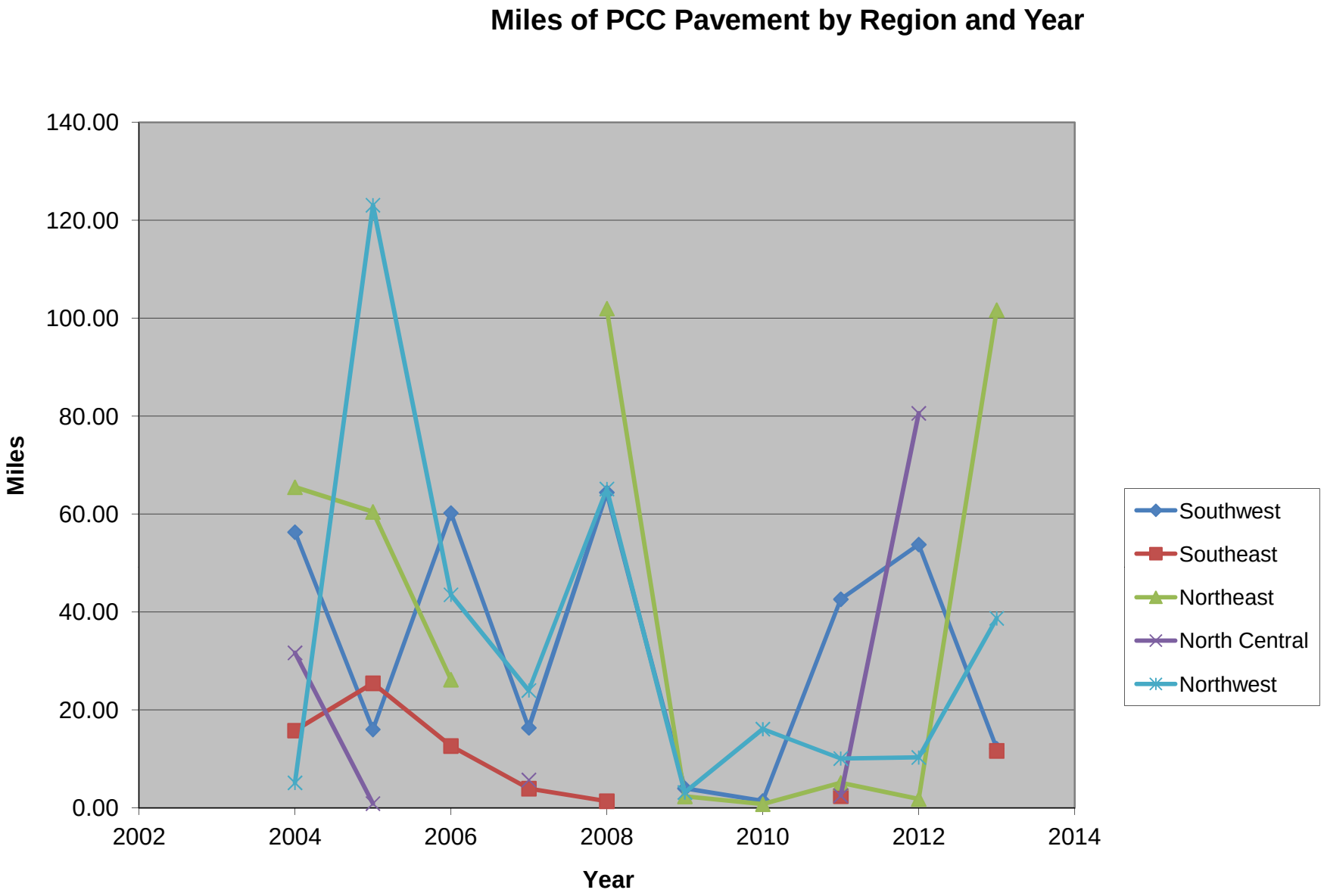
Location/Method	2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		10 Year Total	10 Year Average
	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI
URBAN																						
Reconstruction	18.43	1.85	109.21	1.66	73.43	1.56	3.94	2.03	76.17	1.30	3.95	1.53	1.53	2.21	10.02	2.18	4.78	2.57	122.89	1.59	424.35	1.59
Replacement													1.42	2.00							1.42	2.00
Resurfacing																						
Rehabilitation					8.11	1.05	5.71	2.00	27.16	1.14			24.51	1.09							65.49	1.19
RURAL																						
Reconstruction	155.95	1.19	116.65	1.58	61.06	1.43	16.36	1.47	72.36	1.43	5.55	1.94	15.34	1.03	52.75	1.53	141.70	1.55	41.26	1.60	678.98	1.44
Replacement													4.89	1.39							4.89	1.39
Resurfacing																					0.00	
Rehabilitation							23.98	2.18	57.18	1.85											81.16	1.95
TOTAL	**174.38**	**1.26**	**225.86**	**1.62**	**142.60**	**1.48**	**49.99**	**1.92**	**232.87**	**1.46**	**9.50**	**1.77**	**47.69**	**1.16**	**62.77**	**1.63**	**146.48**	**1.58**	**164.15**	**1.59**	**1256.29**	**1.51**

Location and Construction Method

ASPHALTIC CONCRETE PAVEMENTS

Type	2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		10 Year Total	10 Year Average
	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested`	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI
URBAN																						
Reconstruction	46.20	1.08	38.33	1.39	20.32	1.24	25.32	1.30	56.80	1.16	26.09	1.25	15.05	1.44	61.08	1.02	12.48	1.68	40.26	1.04	341.93	1.19
Replacement					5.54	1.24	14.10	0.94													19.64	1.02
Resurfacing	39.20	1.25	64.36	1.08	30.33	0.97	61.73	1.17	130.93	1.31	90.92	0.74	58.11	1.10	49.92	1.06	72.70	1.20	98.46	1.04	696.66	1.10
Rehabiliation							2.12	1.23													2.12	1.23
RURAL																						
Reconstruction	360.18	0.71	179.34	0.83	165.08	0.79	53.97	0.71	136.63	0.85	176.83	0.77	202.04	0.65	183.96	0.70	94.27	0.66	61.26	0.71	1613.56	0.74
Rehabilitation			109.35	0.81	32.49	0.67	46.56	0.94	56.36	0.98											244.76	0.86
Replacement			40.44	0.74	176.87	0.76	44.11	0.74	55.57	0.56	28.30	0.65	1.93	1.49	10.87	0.63			37.34	0.80	395.43	0.72
Resurfacing	515.00	0.64	302.13	0.77	379.62	0.72	459.45	0.71	945.24	0.70	791.41	0.75	931.82	0.76	608.24	0.78	360.80	0.71	551.28	0.74	5844.99	0.73
TOTAL	**960.58**	**0.71**	**733.95**	**0.85**	**810.25**	**0.77**	**707.36**	**0.79**	**1381.53**	**0.80**	**1113.55**	**0.76**	**1208.95**	**0.77**	**914.07**	**0.79**	**540.25**	**0.79**	**788.60**	**0.79**	**9159.09**	**0.78**

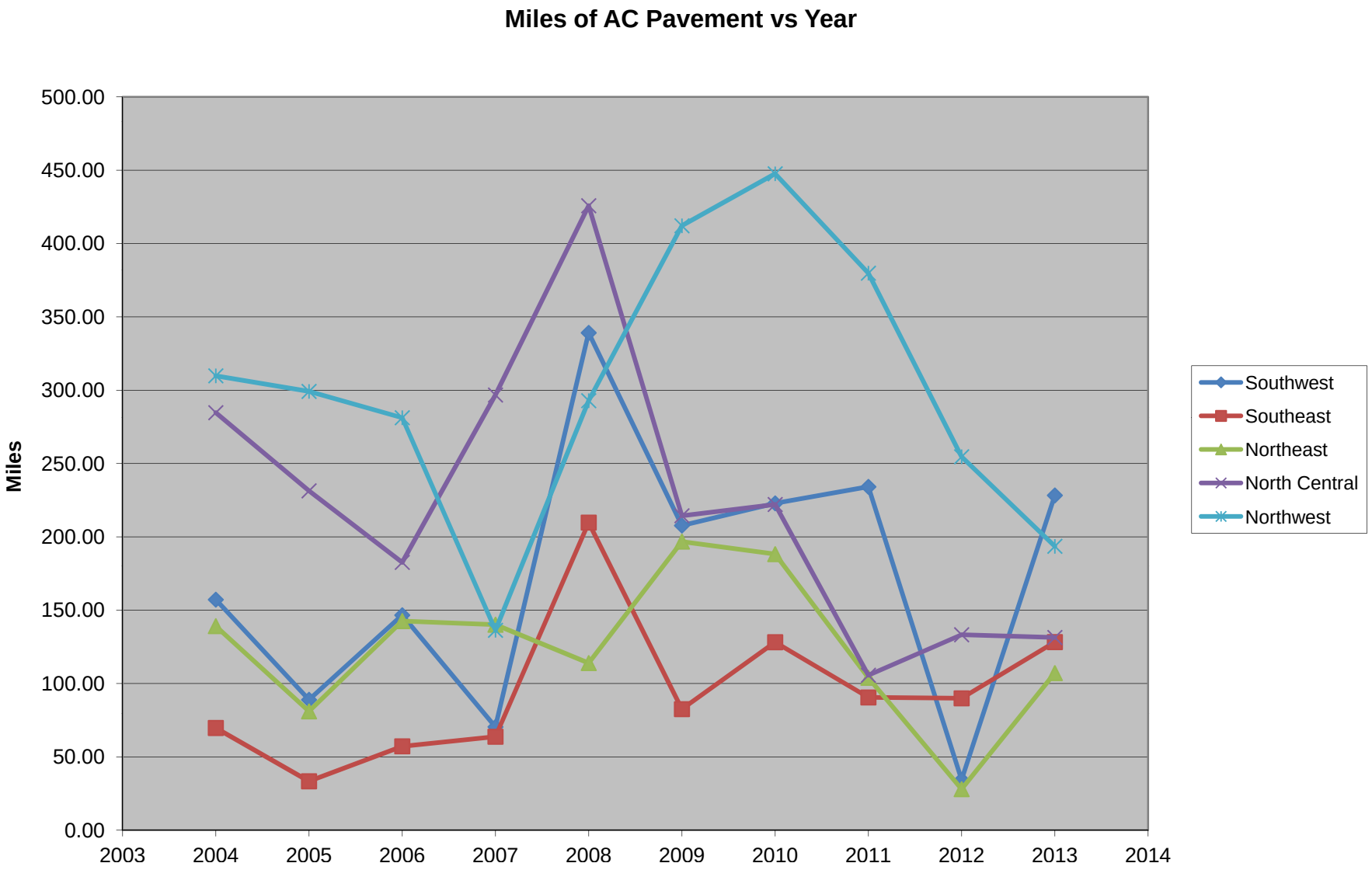

PCC IRI for each Region by Year
IRI
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
2002
2004
2006
2008
2010
2012
2014
Year
Southwest
Southeast
Northeast
North Central
Northwest

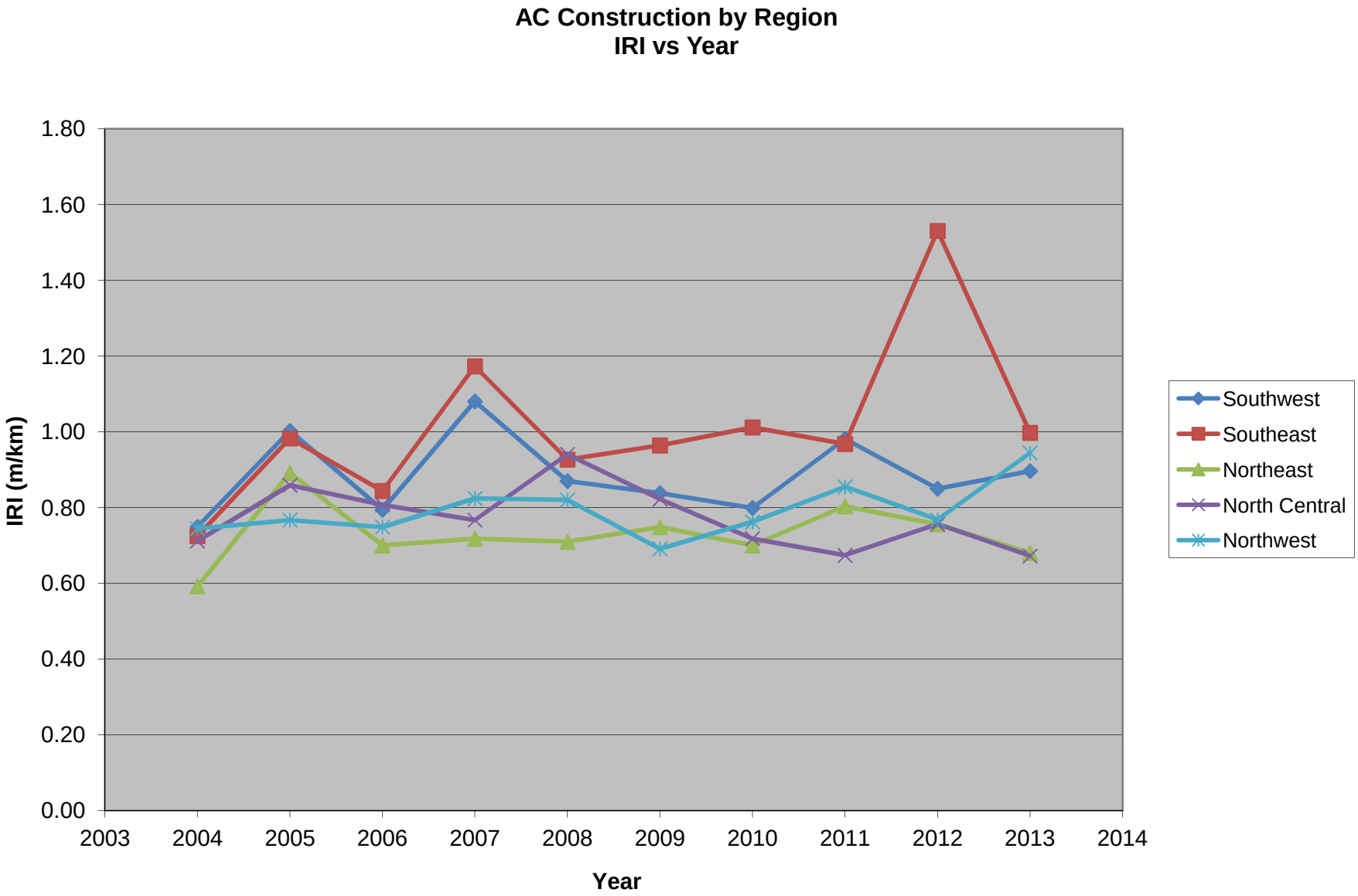

Miles of PCC Pavement by Region and Year
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Miles
2002
2004
2006
2008
2010
2012
2014
Year
Southwest
Southeast
Northeast
North Central
Northwest

CONSTRUCTION TECHNIQUE by REGION

PORTLAND CEMENT CONCRETE PAVEMENTS

Region		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		10 Year Total	10 Year Average
		Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI
Southwest																							
	Reconstruction	56.31	1.44	16.02	1.96	60.23	1.50	16.36	1.47	9.68	1.78	3.99	1.66			42.62	1.55	53.78	1.68	12.13	1.70	271.12	1.58
	Rehabilitation									54.74	1.87											54.74	1.87
	Replacement													1.42	2.00							1.42	2.00
	Resurfacing																						
Region Total		**56.31**	**1.44**	**16.02**	**1.96**	**60.23**	**1.50**	**16.36**	**1.47**	**64.42**	**1.86**	**3.99**	**1.66**	**1.42**	**2.00**	**42.62**	**1.55**	**53.78**	**1.68**	**12.13**	**1.70**	**327.28**	**1.63**
Southeast																							
	Reconstruction	15.79	1.50	25.44	1.97	12.66	1.38	3.94	2.03	1.37	1.83					2.42	2.93			11.66	2.02	73.28	1.81
	Replacement																						
	Resurfacing																						
Region Total		**15.79**	**1.50**	**25.44**	**1.97**	**12.66**	**1.38**	**3.94**	**2.03**	**1.37**	**1.83**					**2.42**	**2.93**			**11.66**	**2.02**	**73.28**	**1.81**
Northeast																							
	Reconstruction	65.49	0.97	60.45	1.65	18.08	1.35			72.36	1.43	2.36	2.07	0.78	2.69	5.13	2.01	1.81	2.56	101.66	1.54	328.12	1.43
	Rehabilitation					8.11	1.05			29.61	1.15											37.72	1.13
	Replacement																						
	Resurfacing																						
District Total		**65.49**	**0.97**	**60.45**	**1.65**	**26.19**	**1.26**			**101.97**	**1.35**	**2.36**	**2.07**	**0.78**	**2.69**	**5.13**	**2.01**	**1.81**	**2.56**	**101.66**	**1.54**	**365.84**	**1.40**
North Central																							
	Reconstruction	31.67	1.44	0.89	2.42											2.51	1.60	80.57	1.50			115.64	1.49
	Rehabilitation							5.71	2.00													5.71	2.00
	Replacement																						
	Resurfacing																						
District Total		**31.67**	**1.44**	**0.89**	**2.42**			**5.71**	**2.00**							**2.51**	**1.60**	**80.57**	**1.50**			**121.35**	**1.52**
Northwest																							
	Reconstruction	5.13	1.18	123.07	1.48	43.52	1.59			65.12	1.22	3.15	1.68	16.09	1.06	10.09	1.47	10.31	1.55	38.71	1.56	315.19	1.43
	Rehabilitation							23.98	2.18													23.98	2.18
	Replacement																						
	Resurfacing																						
Region Total		**5.13**	**1.18**	**123.07**	**1.48**	**43.52**	**1.59**	**23.98**	**2.18**	**65.12**	**1.22**	**3.15**	**1.68**	**16.09**	**1.06**	**10.09**	**1.47**	**10.31**	**1.55**	**38.71**	**1.56**	**339.17**	**1.48**
Region Totals		**174.39**	**1.26**	**225.87**	**1.62**	**142.60**	**1.47**	**49.99**	**1.92**	**232.88**	**1.46**	**9.50**	**1.77**	**18.29**	**1.20**	**62.77**	**1.63**	**146.47**	**1.58**	**164.16**	**1.59**	**1226.92**	**1.52**


Miles of AC Pavement vs Year
Miles
500.00
450.00
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Southwest
Southeast
Northeast
North Central
Northwest


AC Construction by Region
IRI vs Year
IRI (m/km)
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year
Southwest
Southeast
Northeast
North Central
Northwest

REGION and CONSTRUCTION TECHNIQUE

ASPHALTIC CONCRETE PAVEMENTS

Region	2004 Lane Miles Tested	2004 Average IRI	2005 Lane Miles Tested	2005 Average IRI	2006 Lane Miles Tested	2006 Average IRI	2007 Lane Miles Tested	2007 Average IRI	2008 Lane Miles Tested	2008 Average IRI	2009 Lane Miles Tested	2009 Average IRI	2010 Lane Miles Tested	2010 Average IRI	2011 Lane Miles Tested	2011 Average IRI	2012 Lane Miles Tested	2012 Average IRI	2013 Lane Miles Tested	2013 Average IRI	10 Year Total Lane Miles Tested	10 Year Average Average IRI
Southwest																						
Reconstruction	91.36	0.82	52.95	1.06	43.54	0.80	1.14	1.30	83.41	1.30	104.31	0.91	70.15	0.71	146.01	0.96			16.04	1.40	608.91	0.96
Replacement					86.80	0.77					11.12	0.65			10.87	0.63			22.24	0.93	131.03	0.78
Resurfacing	65.86	0.65	24.47	0.94	16.28	0.91	46.17	1.08	255.74	0.73	92.27	0.78	152.71	0.84	77.28	1.07	34.33	0.85	189.99	0.85	955.10	0.83
Rehabilitation			11.52	0.87			23.10	1.07													34.62	1.00
Region Total	**157.22**	**0.75**	**88.94**	**1.00**	**146.62**	**0.79**	**70.41**	**1.08**	**339.15**	**0.87**	**207.70**	**0.84**	**222.86**	**0.80**	**234.16**	**0.98**	**34.33**	**0.85**	**228.27**	**0.90**	**1729.66**	**0.85**
Southeast																						
Reconstruction	52.65	0.71	8.59	1.74	15.73	1.25	8.74	1.01	68.26	0.65	4.81	1.03	20.68	0.71	53.49	0.96	42.15	1.69	59.28	0.82	334.38	0.95
Replacement							14.10	0.94													14.10	0.94
Resurfacing	17.05	0.77	24.75	0.72	41.45	0.69	35.01	1.34	141.48	1.06	77.73	0.96	107.50	1.07	37.02	0.98	47.77	1.39	68.98	1.15	598.74	1.05
Rehabiliation							5.90	0.98													5.90	0.98
Region Total	**69.70**	**0.72**	**33.34**	**0.98**	**57.18**	**0.84**	**63.75**	**1.17**	**209.74**	**0.93**	**82.54**	**0.96**	**128.18**	**1.01**	**90.51**	**0.97**	**89.92**	**1.53**	**128.26**	**1.00**	**947.22**	**1.01**
Northeast																						
Reconstruction	15.25	0.69			22.18	0.80					27.04	0.99	30.55	0.65	22.63	0.96	23.89	0.69			141.54	0.80
Replacement					11.09	0.70	32.59	0.71													43.68	0.71
Resurfacing	123.89	0.58	72.83	0.91	109.32	0.68	107.54	0.72	113.95	0.71	169.73	0.71	157.68	0.71	81.29	0.76	4.11	1.14	107.12	0.68	1047.46	0.71
Rehabilitation			8.21	0.73																	8.21	0.73
Region Total	**139.14**	**0.59**	**81.04**	**0.89**	**142.59**	**0.70**	**140.13**	**0.72**	**113.95**	**0.71**	**196.77**	**0.75**	**188.23**	**0.70**	**103.92**	**0.80**	**28.00**	**0.76**	**107.12**	**0.68**	**1240.89**	**0.72**
North Central																						
Reconstruction	53.14	0.85	99.15	0.85	66.00	0.85	19.51	1.48	35.10	1.32	22.09	0.65	57.49	0.77	6.28	0.58	26.31	0.70	15.55	0.57	400.62	0.87
Replacement			21.28	0.70	5.54	1.24					6.75	0.63							5.02	0.59	38.59	0.75
Resurfacing	231.54	0.68	58.90	0.94	111.07	0.76	263.36	0.71	375.32	0.90	185.56	0.85	164.61	0.70	99.37	0.68	106.94	0.77	110.83	0.69	1707.50	0.77
Rehabilitation			52.08	0.85			13.86	0.85	15.40	1.07											81.34	0.89
Region Total	**284.68**	**0.71**	**231.41**	**0.86**	**182.61**	**0.81**	**296.73**	**0.77**	**425.82**	**0.94**	**214.40**	**0.82**	**222.10**	**0.72**	**105.65**	**0.67**	**133.25**	**0.76**	**131.40**	**0.67**	**2228.05**	**0.80**
Northwest																						
Reconstruction	193.98	0.70	56.98	0.83	37.94	0.72	49.89	0.91	6.65	1.28	44.67	0.63	38.22	0.96	16.61	0.96	14.39	1.40	10.66	1.12	469.99	0.80
Replacement			19.15	0.78	78.99	0.76	11.52	0.82	55.57	0.56	10.43	0.66	1.93	1.49					10.08	0.66	187.67	0.70
Resurfacing	115.85	0.82	185.53	0.75	131.83	0.77	69.11	0.74	189.67	0.85	357.03	0.70	407.42	0.74	363.21	0.85	240.25	0.73	172.84	0.95	2232.74	0.78
Rehabilitation			37.54	0.75	32.49	0.67	5.81	1.10	40.97	0.96											116.81	0.82
Region Total	**309.83**	**0.74**	**299.20**	**0.77**	**281.25**	**0.75**	**136.33**	**0.82**	**292.86**	**0.82**	**412.13**	**0.69**	**447.57**	**0.76**	**379.82**	**0.85**	**254.64**	**0.77**	**193.58**	**0.94**	**3007.21**	**0.78**
TOTAL	**960.57**	**0.71**	**733.93**	**0.85**	**810.25**	**0.77**	**707.35**	**0.83**	**1381.52**	**0.88**	**1113.54**	**0.77**	**1208.94**	**0.78**	**914.06**	**0.87**	**540.14**	**0.90**	**788.63**	**0.86**	**9153.03**	**0.81**

Project Data
10 Year Average
by

Contractor	2004 Lane Miles Tested	2004 Average IRI	2005 Lane Miles Tested	2005 Average IRI	2006 Lane Miles Tested	2006 Average IRI	2007 Lane Miles Tested	2007 Average IRI	2008 Lane Miles Tested	2008 Average IRI	2009 Lane Miles Tested	2009 Average IRI	2010 Lane Miles Tested	2010 Average IRI	2011 Lane Miles Tested	2011 Average IRI	2012 Lane Miles Tested	2012 Average IRI	2013 Lane Miles Tested	2013 Average IRI	10 Year Total Lane Miles Tested	10 Year Average Average IRI
Augelli Construction			1.97	2.36													2.96	2.58			4.93	2.49
Chippewa Concrete	1.65	1.78	18.51	1.60	5.50	1.71			2.71	1.73	1.66	1.55	10.05	0.99	34.42	1.50	10.31	1.55	20.88	1.46	105.69	1.49
James Cape & Sons	60.56	0.83																			60.56	0.83
LaLonde Contractors	3.22	2.72	2.48	2.59	3.72	2.06							0.78	2.69			1.81	2.56			12.01	2.46
Milwaukee General																						
Parisi Construction																			0.82	2.41	0.82	2.41
Progressive Contractors																						
Ptaschinski Construction									1.60	1.98	1.51	2.16									3.11	2.07
PCC Construction Co.(Streu)	70.27	1.50	77.88	1.60	3.96	1.22															152.11	1.54
Trierweiler Construction	36.86	1.32	91.27	1.47	65.88	1.48	22.06	1.61	70.50	1.26	0.74	1.40	12.35	1.36	1.50	1.23	80.57	1.50	52.84	1.57	434.57	1.45
Vinton											1.64	2.38			5.13	2.01					6.77	2.10
Zignego	1.82	2.06	33.76	1.97	4.65	1.23	3.94	2.03	42.27	1.52	0.72	1.38			18.29	1.59			20.73	1.83	126.18	1.71
CPR Inc					0.56	2.08	23.98	2.18	57.18	1.85											81.72	1.95
Penhall					7.56	0.97															7.56	0.97
Northeast Asphalt									27.16	1.14											27.16	1.14
Mann Brothers									1.37	1.83											1.37	1.83
Michels					50.77	1.51			30.10	1.32	1.74	1.34			2.42	2.93	50.82	1.63	60.13	1.53	195.98	1.53
Sommers															1.01	2.16					1.01	2.16
Wisconsin Constructors																			8.75	1.77	8.75	1.77
Pember Companies											1.49	1.82									1.49	1.82
TOTAL	**174.38**	**1.26**	**225.87**	**1.62**	**142.60**	**1.47**	**49.98**	**1.92**	**232.89**	**1.32**	**9.50**	**1.77**	**23.18**	**1.24**	**62.77**	**1.59**	**146.47**	**1.58**	**164.15**	**1.59**	**1231.79**	**1.51**

Contractor	2004 Lane Miles Tested	2004 Average IRI	2005 Lane Miles Tested	2005 Average IRI	2006 Lane Miles Tested	2006 Average IRI	2007 Lane Miles Tested	2007 Average IRI	2008 Lane Miles Tested	2008 Average IRI	2009 Lane Miles Tested	2009 Average IRI	2010 Lane Miles Tested	2010 Average IRI	2011 Lane Miles Tested	2011 Average IRI	2012 Lane Miles Tested	2012 Average IRI	2013 Lane Miles Tested	2013 Average IRI	10 Year Total Lane Miles Tested	10 Year Average Average IRI
American Asphalt	88.61	0.83	98.65	1.03	73.47	0.80	127.50	0.73	181.61	0.98	95.52	0.76	118.01	0.67	56.40	0.74	84.51	0.79	57.75	0.72	982.03	0.82
Black Construction																					0.00	0.00
B.R. Amon & Sons	95.87	0.66	89.28	0.69	70.24	0.74	59.18	0.69	163.34	0.78	50.44	0.81	54.24	0.82	32.85	0.84	80.51	0.63			695.95	0.73
Black Diamond	4.40	1.16																			4.40	1.16
D.L. Gasser Construction	3.58	1.46	28.70	0.86	13.27	0.69	29.60	0.88	86.73	0.86	12.28	0.70	92.25	0.67	22.31	0.78	10.81	0.57	96.90	0.86	396.43	0.80
Frank Brothers													0.93	2.38							0.93	2.38
Iverson											29.50	1.15	30.53	0.95					5.92	0.94	65.95	1.04
Mathy Construction	241.09	0.72	149.71	0.78	174.12	0.79	47.83	0.73	41.38	1.20	161.92	0.75	153.58	0.78	296.74	0.79	30.16	0.71	54.10	0.95	1350.63	0.79
Monarch Paving	90.73	0.82	81.35	0.78	140.35	0.75	64.08	0.83	206.45	0.66	284.23	0.70	281.43	0.77	112.77	0.76	127.95	0.79	139.24	0.75	1528.58	0.75
MCC			7.07	2.12	27.34	0.82	9.56	0.83	52.10	0.83	10.37	0.83	4.20	1.19	0.65	1.86	4.11	1.14	2.51	0.82	117.91	0.93
Musson Bros.																					0.00	0.00
Northeast Asphalt	310.56	0.63	132.95	0.80	150.63	0.75	167.53	0.68	221.46	0.68	280.06	0.69	282.46	0.71	144.41	0.69	52.54	0.58	163.55	0.68	1906.15	0.69
Northwoods Paving	12.43	0.78	14.11	1.04	43.93	0.79	24.32	0.82			24.13	0.78	35.52	0.85	97.63	0.87	28.59	0.82	28.51	0.91	309.17	0.85
Paving Mix																					0.00	0.00
Payne & Dolan	49.78	0.94	32.32	1.15	68.79	0.87	102.34	1.08	301.98	0.78	63.45	0.89	69.58	0.97	44.37	0.84	64.95	1.21	145.15	0.80	942.71	0.90
Pitlick & Wick Inc.			39.84	0.62	28.29	0.65	25.61	0.62	14.76	0.74	26.83	1.35	8.03	0.67	14.20	0.59	13.50	0.55	12.95	0.74	184.01	0.74
Rock Road Companies,Inc	57.53	0.69	58.19	0.91	19.81	0.61	1.14	1.30	41.53	0.44	46.33	0.68	39.97	0.71	27.64	0.80	35.86	0.68	53.91	0.75	381.91	0.71
Ulland Bros.																					0.00	0.00
Washburn County																					0.00	0.00
Columbia County							4.05	1.11									2.99	1.05			7.04	1.08
Dane County							7.87	0.83													7.87	0.83
Iowa County							2.64	1.20													2.64	1.20
Jackson County							2.44	1.05													2.44	1.05
Jefferson County							4.75	0.75													4.75	0.75
Kenosha County							5.90	0.98													5.90	0.98
Lincoln County							3.78	0.83													3.78	0.83
Marathon County							10.08	0.87													10.08	0.87
Rock County							2.41	1.12													2.41	1.12
Sauk County							1.38	1.27									1.79	1.10			3.17	1.17
St. Croix County							3.37	1.15													3.37	1.15
Clark County									34.72	0.95											34.72	0.95
Outagamie Co															2.54	0.79					2.54	0.79
Pierce County									6.25	0.97											6.25	0.97
Wood County									15.40	1.07											15.40	1.07
Wolf Paving													21.57	0.91							21.57	0.91
Fahrner															1.08	2.25					1.08	2.25
Stark Asphalt	6.00	0.70	1.79	2.86					13.82	1.21	28.48	0.98	16.66	0.91	60.51	0.99	1.88	1.26	28.13	1.16	157.27	1.04
TOTAL	**960.58**	**0.72**	**733.96**	**0.85**	**810.24**	**0.77**	**707.36**	**0.80**	**1381.53**	**0.79**	**1113.54**	**0.76**	**1208.96**	**0.75**	**914.10**	**0.79**	**540.15**	**0.78**	**788.62**	**0.79**	**9159.04**	**0.78**

10 Year Ride Measurement Project Data

Construction Technique	2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		10 Year Total	10 Year Average
	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI	Lane Miles Tested	Average IRI
Pavement Depth:																						
5.00																					0.00	0.00
7.00	5.55	2.48																			5.55	2.48
7.50									1.37	1.83	2.25	1.91									3.62	1.88
7.75																					0.00	0.00
8.00	1.65	1.78	15.57	2.11	28.80	1.54			4.30	1.82			0.75	1.71			2.96	2.58	0.71	3.60	54.74	1.77
8.50			15.21	2.01	23.02	1.46	16.36	1.47	5.38	1.75	3.38	1.84									63.35	1.64
8.75																					0.00	0.00
9.00	47.96	0.63	49.04	1.65	17.38	1.72			137.48	1.33	1.49	1.82	11.60	1.33	27.39	1.67	43.94	1.63	3.02	2.47	339.30	1.35
9.50			23.51	1.69									10.83	1.11	12.51	1.75			20.06	1.70	66.91	1.10
9.75	13.73	1.38																			13.73	1.38
10.00	58.78	1.54	102.22	1.52	12.29	1.72					2.38	1.50			22.87	1.52	99.57	1.54	2.10	1.98	300.21	1.53
10.50			5.96	1.69	9.71	1.59	3.94	2.03													19.61	1.71
10.75																					0.00	0.00
11.00	41.59	1.48			18.08	1.35													101.66	1.54	161.33	0.53
11.50			14.36	1.17	25.21	1.30															39.57	1.25
12.00	5.13	1.17																	26.56	1.58	31.69	0.19
13.00																			10.06	1.41	10.06	0.00
Pavement Depth Totals	**174.39**	**1.28**	**225.87**	**1.62**	**134.49**	**1.50**	**20.30**	**1.58**	**148.53**	**1.36**	**9.50**	**1.77**	**23.18**	**1.24**	**62.77**	**1.63**	**146.47**	**1.59**	**164.17**	**1.59**	**1109.67**	**1.22**
Transverse Joints:																						
Skewed																					0.00	0.00
Normal	174.38	1.28	225.87	1.62	134.49	1.50	20.30	1.58	148.53	1.37	9.50	1.77	23.18	1.24	62.77	1.63	146.48	1.59	164.17	1.59	1109.67	1.27
Transverse Joint Totals	**174.38**	**1.28**	**225.87**	**1.62**	**134.49**	**1.50**	**20.30**	**1.58**	**148.53**	**1.37**	**9.50**	**1.77**	**23.18**	**1.24**	**62.77**	**1.63**	**146.48**	**1.59**	**164.17**	**1.59**	**1109.67**	**1.27**
Joint Spacing:																						
6-foot																					0.00	0.00
14-foot	2.33	2.15																			2.33	2.15
16-foot	4.29	1.78			32.07	1.37															36.36	1.42
15-foot	32.97	0.29	170.59	1.64	64.91	1.60	20.30	1.58	148.53	1.37	9.50	1.77	23.17	1.24	62.77	1.63	146.48	1.59	164.16	1.59	843.38	1.20
18-foot	124.09	1.49	55.28	1.56	37.50	1.44															216.87	1.50
20-foot	10.70	1.20																			10.70	1.20
Unknown																						
Joint Spacing Totals	**174.38**	**1.26**	**225.87**	**1.62**	**134.48**	**1.50**	**20.30**	**1.58**	**148.53**	**1.37**	**9.50**	**1.77**	**23.17**	**1.24**	**62.77**	**1.63**	**146.48**	**1.59**	**164.16**	**1.59**	**1109.64**	**1.27**
Longitudinal Joints:																						
Sawed	174.38	1.26	225.86	1.62	134.49	1.50	20.30	1.58	148.53	1.37	9.50	1.77	23.17	1.24	62.77	1.63	146.48	1.59	164.16	1.59	1109.64	1.26
Parting strip																						
Unknown																						
Construction																						
Longitudinal Joint Totals	**174.38**	**1.26**	**225.86**	**1.62**	**134.49**	**1.50**	**20.30**	**1.58**	**148.53**	**1.37**	**9.50**	**1.77**	**23.17**	**1.24**	**62.77**	**1.63**	**146.48**	**1.59**	**164.16**	**1.59**	**1109.64**	**1.26**
Dowels:																						
Baskets	32.06	1.68	86.74	1.72	41.74	1.45	20.30	1.58	106.26	1.30	7.04	1.91	13.12	1.43	62.77	1.63	146.48	1.59	5.82	2.43	522.33	1.53
Inserted	142.32	1.17	139.12	1.56	92.75	1.52			42.27	1.52	2.46	1.35	10.05	0.99					158.33	1.56	587.30	1.03
Unknown																						
Dowels Totals	**174.38**	**1.26**	**225.86**	**1.62**	**134.49**	**1.50**	**20.30**	**1.58**	**148.53**	**1.36**	**9.50**	**1.76**	**23.17**	**1.24**	**62.77**	**1.63**	**146.48**	**1.59**	**164.15**	**1.59**	**1109.63**	**1.26**
Base:																						
CABC	75.58	1.51	198.42	1.66	125.88	1.52	20.30	1.58	148.53	1.37	3.87	1.62									572.58	1.53
OGBC	98.80	1.07	27.44	1.31	8.61	1.22															134.85	1.13
DENSE GRADED											5.63	1.87	18.28	1.20	62.77	1.63	146.48	1.59	165.15	1.59	398.31	0.92
Base Totals	**174.38**	**1.26**	**225.86**	**1.62**	**134.49**	**1.50**	**20.30**	**1.58**	**148.53**	**1.37**	**9.50**	**1.77**	**18.28**	**1.20**	**62.77**	**1.63**	**146.48**	**1.59**	**165.15**	**1.59**	**1105.74**	**1.26**
PCC Overlays:																						
Bonded																						
Unbonded																						
Whitetopping																					0.00	0.00
Ultra-Thin Whitetopping																						
Overlay Totals																					**0.00**	**0.00**
Other:																						
Partial Depth Repair							29.69	2.15													29.69	2.15
Patch and Grind																						
Diamond Grind																						
Retrofit Dowels					8.11	1.05			84.34	1.62			24.51	1.09							116.96	1.47
PCC Warranty	32.82	1.44	60.38	1.71	16.40	1.46					1.74	1.34									111.34	1.59
Other Totals	**32.82**	**1.44**	**60.38**	**1.71**	**24.51**	**1.32**	**29.69**	**2.15**	**84.34**	**1.62**	**1.74**	**1.34**	**24.51**	**1.09**							**257.99**	**1.60**

10 Year Ride Measurement Project Data for AC Pavement

CONSTRUCTION TECHNIQUE

Construction Technique	2004 Lane Miles Tested	2004 Average IRI	2005 Lane Miles Tested	2005 Average IRI	2006 Lane Miles Tested	2006 Average IRI	2007 Lane Miles Tested	2007 Average IRI	2008 Lane Miles Tested	2008 Average IRI	2009 Lane Miles Tested	2009 Average IRI	2010 Lane Miles Tested	2010 Average IRI	2011 Lane Miles Tested	2011 Average IRI	2012 Lane Miles Tested	2012 Average IRI	2013 Lane Miles Tested	2013 Average IRI	10 Year Total Lane Miles Tested	10 Year Average Average IRI
Resurfacing:																						
Type 1 - AC over Flex Base	802.41	0.70	627.32	0.83	676.22	0.77	479.37	0.74	1026.42	0.80	895.34	0.77	570.01	0.75	741.70	0.79	420.71	0.73	457.32	0.77	6696.82	0.72
Type 3 - AC over PCC	158.17	0.66	106.62	0.98	134.02	0.77	227.98	0.91	355.09	0.77	218.20	0.77	458.16	0.81	172.37	0.80	119.44	1.00	331.27	0.82	2281.32	0.70
Resurfacing Totals	**960.58**	**0.69**	**733.94**	**0.85**	**810.24**	**0.77**	**707.35**	**0.79**	**1381.51**	**0.79**	**1113.54**	**0.77**	**1028.17**	**0.78**	**914.07**	**0.79**	**540.15**	**0.79**	**788.59**	**0.79**	**8978.14**	**0.71**
Special Pavement Types:																						
SMA	15.96	1.11	28.35	0.99	22.18	0.79	36.11	0.72					196.77	0.87	156.19	0.94			74.89	0.69	530.45	0.77
Special Mix							2.64	1.20			96.00	0.82					2.62	0.56	94.01	0.79	195.27	0.43
Warranty	165.47	0.66	175.37	0.78	374.92	0.71	161.38	0.74	379.77	0.72	422.77	0.66	280.91	0.65	301.67	0.68	69.50	0.59	31.05	0.69	2362.81	0.68
Special Totals	**181.43**	**0.70**	**203.72**	**0.81**	**397.10**	**0.71**	**200.13**	**0.74**	**379.77**	**0.72**	**518.77**	**0.69**	**477.68**	**0.74**	**457.86**	**0.77**	**72.12**	**0.59**	**199.95**	**0.74**	**3088.53**	**0.68**
Paved Over:																						
CABC	203.14	0.80	117.58	1.07	152.40	0.81	48.91	1.04	135.20	0.96	15.83	1.05									673.06	0.90
OGBC1					11.73	1.20	10.21	1.09					8.03	0.67							29.97	1.02
OGBC2	11.06	0.65																			11.06	0.65
Repo AC Base	1.64	1.36	13.48	0.73	13.27	0.64															28.39	0.72
Pulverized	141.58	0.68	112.40	0.73	85.10	0.74	17.21	0.62	149.34	0.65	62.27	0.64	51.64	0.69	120.40	0.66	57.54	0.55			797.48	0.67
Rubblized	48.96	0.77	16.60	0.84	80.43	0.84	65.01	0.70	86.51	1.21	65.35	0.62	38.24	0.64	97.03	0.86	38.75	0.73	46.53	0.64	583.41	0.76
Crack & Seat	3.36	1.09					13.80	0.53											27.46	0.94	44.62	0.25
Existing Old AC	396.03	0.65	347.07	0.79	308.42	0.72	307.87	0.72	599.80	0.77	587.17	0.77	531.77	0.76	485.79	0.80	293.59	0.72	322.40	0.74	4179.91	0.69
Existing Old PCC	154.81	0.77	106.62	0.98	134.02	0.77	227.98	0.91	355.09	0.77	218.20	0.77	458.16	0.81	172.37	0.81	119.44	1.00	331.27	0.82	2277.96	0.70
Full-depth Mill			20.19	0.78							28.30	0.65							5.02	0.59	53.51	0.64
Mill & Relay					24.87	0.81	16.36	0.58	55.57	0.56	74.31	0.62	49.80	0.70	4.58	1.18	3.63	0.55	42.01	0.79	271.13	0.55
Dense Graded											62.11	1.09	69.38	0.77	33.90	0.89	27.20	1.30	13.90	1.52	206.49	0.90
Paved Over Totals	**960.58**	**0.71**	**733.94**	**0.85**	**810.24**	**0.77**	**707.35**	**0.80**	**1381.51**	**0.79**	**1113.54**	**0.76**	**1207.02**	**0.77**	**914.07**	**0.80**	**540.15**	**0.79**	**788.59**	**0.79**	**8950.50**	**0.69**
Pavement Depth (inches):																						
0.50																					0.00	0.00
0.75	15.96	1.11																			15.96	1.11
1.00																					0.00	0.00
1.25							2.64	1.20													2.64	1.20
1.50							5.81	1.11											16.64	1.28	22.45	0.29
1.75	81.22	0.78	178.59	0.91	38.07	0.81	90.47	0.69	100.97	0.93	88.29	0.80			20.06	0.80	60.06	0.79	49.87	0.77	707.60	0.77
2.00	21.07	1.21	42.43	0.99	23.12	0.67	138.60	0.78	183.81	0.80	169.03	0.99	495.02	0.80	368.54	0.81	131.64	0.92	270.37	0.77	1843.63	0.72
2.25									11.53	1.62											11.53	1.62
2.50	64.29	0.68	82.60	0.78	111.88	0.78	32.56	0.76	81.67	0.74	20.95	0.78	4.18	0.65	14.42	0.66	19.09	0.65	45.14	0.96	476.78	0.67
2.75	51.55	0.56									123.93	0.73							48.95	0.72	224.43	0.53
3.00	51.66	0.78					5.48	0.79	15.59	1.05	49.97	0.67	5.48	1.03	4.97	1.24	20.85	0.95	29.30	0.56	183.30	0.69
3.25			23.46	0.65															1.55	1.18	25.01	0.61
3.50	189.40	0.67	75.49	0.85	77.55	0.77	192.90	0.83	179.80	0.74	67.05	0.78	95.12	0.73	25.83	0.76	10.46	0.62	76.40	0.76	990.00	0.70
3.75					17.79	0.71			34.07	0.75	10.02	0.83	19.03	0.67	14.05	0.67					94.96	0.72
4.00	147.31	0.67	165.81	0.73	161.89	0.68	95.40	0.84	190.83	0.79	252.01	0.62	285.69	0.70	120.58	0.69	133.86	0.68	98.84	0.84	1652.22	0.66
4.25	18.48	0.73			15.25	0.63					20.50	0.87			45.90	0.64					100.13	0.70
4.50	115.75	0.74	20.14	0.88	152.18	0.84	47.01	0.68	107.31	0.91	56.84	0.93	144.83	0.79	24.53	0.96	27.97	0.65	21.00	0.91	717.56	0.79
4.75	11.06	0.65			13.27	0.69			59.21	0.60					9.82	0.90					93.36	0.65
5.00	42.26	0.70	59.25	0.79	50.59	0.72	26.47	0.79	32.96	0.98	57.05	0.56	11.51	1.17	114.23	0.82	64.35	0.61	4.32	1.08	462.99	0.74
5.25	26.09	0.73	26.06	0.82					24.98	1.10	23.78	1.15	6.00	0.86					9.39	0.60	116.30	0.86
5.50	38.37	0.68	13.09	1.15	23.66	0.67	15.05	0.91	24.18	0.83			36.14	0.62	57.76	0.75			0.88	1.70	209.13	0.75
5.75	12.02	0.71			20.11	0.68									0.65	2.28	5.56	0.93			38.34	0.75
6.00	34.88	0.81	27.96	1.04	19.81	0.61	32.51	0.82	164.32	0.79	68.35	0.67	7.60	1.37	6.28	0.58			17.69	1.02	379.40	0.75
6.25	13.59	0.73			11.73	1.20			163.63	0.62	27.04	0.98			53.49	0.96	14.18	0.79	14.28	0.46	297.94	0.72
6.50			12.25	1.15			22.47	0.90			33.83	0.61	20.68	0.71			7.93	1.97	22.52	0.70	119.68	0.71
6.75			6.80	1.45											4.58	1.18					11.38	1.34
7.00	13.18	0.67			34.39	0.95			6.65	1.28	13.52	0.65	21.86	0.79	28.36	0.78	33.55	0.75	36.81	0.77	188.32	0.66
7.25																			9.70	0.64	9.70	0.00
7.50					16.78	0.91															16.78	0.91
7.75											31.38	0.65							14.00	0.71	45.38	0.45
8.00	12.43	0.78															10.63	0.75	0.97	1.99	24.03	0.74
8.25					22.18	0.79							38.24	0.64							60.42	0.70
8.50																					0.00	0.00
8.75													16.66	0.91							16.66	0.91
9.00																					0.00	0.00
9.25																					0.00	0.00
9.50																					0.00	0.00
9.75																					0.00	0.00
10.00																					0.00	0.00
Pavement Depth Totals	**960.57**	**0.72**	**733.93**	**0.85**	**810.25**	**0.74**	**707.37**	**0.79**	**1381.51**	**0.80**	**1113.54**	**0.76**	**1208.04**	**0.74**	**914.05**	**0.79**	**540.13**	**0.78**	**788.62**	**0.79**	**9158.01**	**0.71**

Note: Prior to 2002 SuperPave was regarded as a non-standard special pavement. From 2002 to the present SuperPave is a Standard pavement and not a Special Pavement.

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