

FUNCTIONAL SYSTEM LENGTH - 2001

MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL

TABLE HM-64

SHEET 1 OF 4

JUNE 2004

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	INTERSTATE									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	259	258	44	30	12	-	-	-	603
Alaska	-	10	146	299	278	266	31	-	-	1,030
Arizona	-	867	114	15	-	-	-	-	-	996
Arkansas	9	4	147	64	44	67	60	38	35	459
California	-	55	551	369	136	143	51	31	22	1,358
Colorado	-	68	487	175	37	-	-	1	-	768
Connecticut	-	3	76	16	2	4	-	-	-	101
Delaware	-	-	-	-	-	-	-	-	-	-
District of Columbia	-	-	-	-	-	-	-	-	-	-
Florida	-	787	99	2	36	27	-	-	-	951
Georgia	-	554	211	37	4	-	-	-	-	806
Hawaii	-	-	-	-	6	-	-	-	-	6
Idaho	-	216	221	76	4	1	4	3	1	526
Illinois	-	123	807	312	226	39	6	-	2	1,515
Indiana	-	366	374	75	32	5	-	-	-	852
Iowa	1	65	290	183	58	38	-	-	-	634
Kansas	-	232	378	70	14	-	-	-	-	694
Kentucky	1	263	126	37	72	33	-	-	-	531
Louisiana	54	100	198	103	73	49	35	-	-	558
Maine	-	24	259	23	6	1	-	-	-	313
Maryland	1	20	162	34	9	1	1	-	-	227
Massachusetts	-	-	71	58	9	25	-	-	-	163
Michigan	-	9	231	163	158	102	58	13	5	739
Minnesota	-	138	373	156	11	3	-	-	-	681
Mississippi	-	92	239	101	59	45	12	8	-	556
Missouri	-	3	248	275	194	77	10	-	-	807
Montana	-	303	626	116	54	20	15	-	1	1,135
Nebraska	-	230	57	63	47	30	10	-	-	437
Nevada	-	398	48	23	11	-	-	-	-	480
New Hampshire	-	25	149	3	-	-	-	-	-	177
New Jersey	-	2	55	27	8	7	10	6	4	119
New Mexico	-	563	294	28	6	-	1	-	-	892
New York	15	116	542	110	49	55	26	27	6	931
North Carolina	-	74	301	131	55	71	6	12	1	651
North Dakota	-	142	295	75	19	-	-	-	-	531
Ohio	-	500	270	42	12	3	-	-	2	829
Oklahoma	7	172	283	143	73	39	2	-	1	713
Oregon	-	9	189	307	71	4	-	-	-	580
Pennsylvania	4	192	671	228	69	23	9	8	4	1,204
Rhode Island	-	-	16	5	-	-	-	-	-	21
South Carolina	-	253	287	89	39	2	-	-	-	670
South Dakota	-	29	344	161	54	39	1	-	1	629
Tennessee	-	534	193	6	1	1	-	-	-	735
Texas	-	290	1,401	350	143	21	2	2	4	2,213
Utah	16	147	301	127	74	73	22	8	4	756
Vermont	-	77	129	48	10	13	-	4	-	281
Virginia	-	71	600	51	3	5	-	-	-	730
Washington	-	162	206	90	38	5	-	-	-	501
West Virginia	-	98	237	33	56	23	2	6	-	455
Wisconsin	1	108	326	99	22	26	-	-	-	581
Wyoming	-	385	367	38	29	7	-	-	-	826
U.S. Total	109	9,138	14,253	5,080	2,441	1,405	374	167	93	32,951
Puerto Rico	-	-	6	21	51	16	5	2	1	102
GRAND TOTAL	109	9,138	14,259	5,101	2,492	1,421	379	169	94	33,053

FUNCTIONAL SYSTEM LENGTH - 2001

MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL

TABLE HM-64

SHEET 2 OF 4

JUNE 2004

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	OTHER PRINCIPAL ARTERIAL										MINOR ARTERIAL 3/									
	NOT REPRTD 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED	NOT REPRTD 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	5	480	1,225	314	48	7	2	-	-	2,076	-	458	2,163	824	146	76	-	-	27	3,694
Alaska	455	-	136	72	31	54	53	2	7	355	219	12	51	71	29	59	-	-	-	222
Arizona	67	347	438	180	83	62	4	4	1	1,119	58	264	404	225	165	24	118	-	-	1,200
Arkansas	80	9	639	666	362	214	108	48	16	2,062	15	-	630	839	588	801	75	55	15	3,003
California	8	51	1,086	1,128	829	446	118	48	21	3,727	-	34	1,233	1,466	1,664	1,044	619	590	315	6,965
Colorado	-	207	996	536	234	181	35	50	7	2,246	-	522	1,024	967	404	413	152	145	10	3,637
Connecticut	-	-	67	80	69	27	14	2	3	262	-	-	42	92	248	78	28	7	-	495
Delaware	11	6	83	80	21	2	3	3	1	199	-	-	59	24	19	6	3	6	4	121
District of Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	6	1,555	1,562	392	131	55	35	10	4	3,744	-	643	1,536	235	86	58	7	20	-	2,585
Georgia	-	2,030	737	34	3	4	1	-	-	2,809	-	3,664	1,879	20	10	-	-	-	-	5,573
Hawaii	4	-	8	40	27	31	13	1	1	121	53	-	38	85	109	38	12	39	3	324
Idaho	-	277	898	342	156	43	8	1	1	1,726	-	216	583	281	131	18	4	1	12	1,246
Illinois	-	86	1,036	678	459	215	95	27	10	2,606	-	715	1,473	1,617	230	506	127	19	112	4,799
Indiana	9	531	660	261	179	68	26	3	1	1,729	-	598	868	362	132	240	26	10	-	2,236
Iowa	3	443	1,291	604	471	400	173	65	36	3,483	35	773	1,039	519	614	382	365	126	104	3,922
Kansas	1	673	1,749	490	174	44	13	13	5	3,161	-	664	2,782	399	405	10	14	10	21	4,305
Kentucky	-	385	1,048	367	174	58	17	1	-	2,050	-	3	671	582	288	84	5	1	-	1,634
Louisiana	13	77	451	205	186	148	98	26	32	1,223	-	166	481	325	380	99	62	55	64	1,632
Maine	-	37	462	195	78	9	4	2	-	787	-	42	478	211	202	67	43	4	-	1,047
Maryland	11	59	329	106	35	11	4	4	4	552	-	41	599	170	97	19	10	14	-	950
Massachusetts	-	1	46	124	70	38	20	9	4	312	-	-	16	94	324	102	78	14	44	672
Michigan	-	183	1,010	687	358	259	120	63	82	2,762	-	58	1,799	1,133	506	77	156	85	294	4,108
Minnesota	-	1,114	1,688	533	201	34	15	4	5	3,594	-	1,131	3,269	1,354	446	97	66	78	21	6,462
Mississippi	-	163	914	457	235	94	19	22	8	1,912	-	20	1,138	1,375	874	269	102	43	3	3,824
Missouri	1	-	493	796	935	488	228	97	90	3,127	-	-	235	962	584	605	202	407	444	3,439
Montana	7	242	1,717	454	119	65	6	9	3	2,615	-	386	1,748	489	138	128	47	52	-	2,988
Nebraska	11	478	998	515	298	229	83	80	33	2,714	-	581	1,743	966	253	242	96	101	229	4,211
Nevada	-	1,072	313	10	1	1	-	-	-	1,397	-	457	215	14	7	13	-	11	-	717
New Hampshire	-	11	255	124	28	17	17	-	7	459	-	9	272	135	38	19	-	6	9	488
New Jersey	9	3	218	161	70	54	11	3	4	524	77	-	153	190	30	26	-	7	14	420
New Mexico	11	773	680	147	116	47	21	27	4	1,815	-	235	621	201	450	234	55	28	42	1,866
New York	24	129	1,185	297	112	44	17	18	27	1,829	-	123	2,328	1,204	302	26	87	-	55	4,125
North Carolina	-	74	1,136	438	298	179	74	24	20	2,243	-	14	752	918	615	338	232	37	82	2,988
North Dakota	-	292	1,434	696	342	145	15	5	-	2,929	-	236	1,023	724	425	75	29	2	-	2,514
Ohio	-	575	1,255	287	88	25	4	3	2	2,239	-	663	1,542	384	240	-	2	-	-	2,831
Oklahoma	252	162	838	484	311	168	105	24	32	2,124	2,268	35	165	204	54	6	6	7	4	481
Oregon	150	13	506	1,247	740	132	34	6	4	2,682	-	22	348	769	677	286	85	7	-	2,194
Pennsylvania	8	179	962	658	370	188	65	32	21	2,475	-	83	1,364	1,477	836	880	267	60	140	5,107
Rhode Island	-	-	9	26	18	5	6	1	1	66	-	-	15	27	22	7	2	-	-	73
South Carolina	-	95	974	283	96	27	11	4	5	1,495	-	247	1,694	810	447	414	43	4	10	3,669
South Dakota	61	110	631	528	486	368	173	103	86	2,485	57	44	629	895	713	480	244	199	88	3,292
Tennessee	2	684	964	140	45	26	8	1	1	1,869	-	56	1,778	714	382	334	154	-	-	3,418
Texas	3	359	3,386	2,163	738	199	18	19	10	6,892	-	77	4,184	3,527	1,434	191	241	1	-	9,655
Utah	30	46	415	261	162	75	13	4	4	980	63	81	338	438	321	174	91	4	26	1,473
Vermont	-	1	152	60	38	30	15	12	7	315	-	6	309	177	85	66	67	22	2	734
Virginia	-	21	752	477	175	78	28	16	10	1,557	6	-	682	1,443	1,100	262	5	57	4	3,553
Washington	-	250	1,064	499	183	68	9	3	3	2,079	23	93	682	553	423	98	24	34	46	1,953
West Virginia	-	131	436	297	131	41	20	13	11	1,080	-	52	395	399	297	225	46	66	55	1,535
Wisconsin	-	809	1,416	616	299	112	60	22	20	3,354	-	1,495	1,553	1,017	330	225	229	146	13	5,008
Wyoming	5	930	900	121	13	16	5	-	-	1,985	-	191	783	202	107	34	1	-	-	1,318
U.S. Total	1,247	16,153	41,648	20,356	10,826	5,331	2,044	934	654	97,946	2,874	15,198	49,767	32,089	18,449	9,925	4,386	2,580	2,312	134,706
Puerto Rico	8	-	-	10	24	30	17	5	8	94	117	-	-	12	10	52	36	30	30	170
GRAND TOTAL	1,255	16,153	41,648	20,366	10,850	5,361	2,061	939	662	98,040	2,991	15,198	49,767	32,101	18,459	9,977	4,422	2,610	2,342	134,876

FUNCTIONAL SYSTEM LENGTH - 2001
MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-64
SHEET 3 OF 4

JUNE 2004

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	INTERSTATE									TOTAL REPORTED
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	
Alabama	-	75	120	41	33	30	3	-	-	302
Alaska	-	12	22	7	3	7	1	-	-	52
Arizona	-	87	47	29	9	-	-	-	-	172
Arkansas	-	-	36	43	33	30	22	15	9	188
California	2	30	180	169	225	250	132	77	33	1,096
Colorado	-	14	90	37	33	10	-	-	-	184
Connecticut	-	6	100	85	29	10	7	4	5	246
Delaware	1	-	7	11	7	3	6	2	3	39
District of Columbia	-	10	1	2	2	1	-	-	-	16
Florida	8	263	190	32	15	12	-	-	-	512
Georgia	1	299	122	15	2	-	-	-	-	438
Hawaii	-	-	7	3	10	10	10	5	4	49
Idaho	-	29	35	10	3	5	2	2	-	86
Illinois	1	20	226	211	126	30	39	2	-	654
Indiana	-	62	149	59	34	9	4	-	1	318
Iowa	-	4	44	35	30	16	12	-	5	146
Kansas	1	12	65	61	27	13	1	-	1	180
Kentucky	-	88	84	22	28	-	5	3	-	230
Louisiana	55	19	67	55	48	36	8	2	2	237
Maine	1	-	44	8	1	-	-	-	-	53
Maryland	9	9	117	64	20	13	7	7	6	243
Massachusetts	-	2	201	122	36	32	8	2	1	404
Michigan	1	5	108	146	93	58	39	17	34	500
Minnesota	-	34	123	44	20	10	2	-	-	233
Mississippi	-	3	28	41	41	10	2	3	-	128
Missouri	-	-	88	109	69	51	21	21	14	373
Montana	-	1	28	11	8	4	2	1	-	55
Nebraska	-	4	18	4	11	4	3	1	-	45
Nevada	-	30	15	12	6	15	2	-	-	80
New Hampshire	-	12	29	7	-	-	-	-	-	48
New Jersey	14	1	80	99	30	39	26	14	10	299
New Mexico	-	36	42	15	7	1	5	1	-	107
New York	19	50	317	118	63	51	30	32	48	709
North Carolina	-	4	199	77	46	22	3	11	7	369
North Dakota	-	10	22	7	1	-	-	-	-	40
Ohio	-	310	334	68	17	7	4	2	2	744
Oklahoma	2	12	61	31	33	18	20	16	15	206
Oregon	1	-	27	66	40	10	1	-	-	144
Pennsylvania	23	36	246	145	58	20	13	8	3	529
Rhode Island	-	-	28	15	5	-	1	-	-	49
South Carolina	-	48	79	18	9	3	1	-	-	158
South Dakota	-	1	18	12	14	4	-	-	-	49
Tennessee	-	136	131	40	19	6	6	1	-	339
Texas	-	34	344	299	204	105	31	4	-	1,021
Utah	11	17	38	42	33	15	7	4	-	156
Vermont	-	5	22	4	2	7	1	-	-	41
Virginia	1	7	141	122	80	25	7	2	2	386
Washington	1	65	95	39	21	28	9	3	3	263
West Virginia	-	23	49	8	5	4	4	1	-	94
Wisconsin	4	23	67	36	15	17	-	-	-	158
Wyoming	-	30	26	21	5	2	3	-	1	88
U.S. Total	156	1,978	4,757	2,777	1,709	1,053	510	263	209	13,256
Puerto Rico	1	-	1	34	59	28	12	7	5	146
GRAND TOTAL	157	1,978	4,758	2,811	1,768	1,081	522	270	214	13,402

FUNCTIONAL SYSTEM LENGTH - 2001

MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-64

SHEET 4 OF 4

JUNE 2004

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	OTHER FREEWAYS AND EXPRESSWAYS										OTHER PRINCIPAL ARTERIAL									
	NOT REPRTD 2/	<60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED	NOT REPRTD 2/	<60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	-	16	1	2	1	-	-	-	20	16	273	499	146	62	20	7	1	3	1,011
Alaska	-	-	-	-	-	-	-	-	-	-	-	7	10	14	5	3	2	2	2	57
Arizona	12	10	81	29	5	4	1	1	-	131	734	46	92	65	38	19	4	-	2	266
Arkansas	3	1	21	13	15	19	7	5	3	84	80	-	33	115	85	100	48	46	72	499
California	-	13	220	292	354	266	106	60	61	1,372	29	20	213	515	939	1,159	983	889	1,179	5,897
Colorado	-	9	80	80	32	14	4	3	3	225	-	19	143	279	106	90	43	153	55	888
Connecticut	-	8	65	72	22	15	8	3	5	198	-	-	24	103	121	118	91	47	100	604
Delaware	3	-	5	5	-	1	-	-	-	11	1	18	48	32	14	8	3	3	7	133
District of Columbia	-	1	7	2	2	1	2	3	3	21	1	-	1	3	3	6	6	9	62	90
Florida	2	159	239	35	14	3	3	-	-	453	10	566	1,223	405	257	122	55	34	24	2,686
Georgia	-	87	25	1	4	3	-	-	-	120	1	719	651	118	38	16	4	4	1	1,551
Hawaii	-	-	4	5	9	10	4	1	1	34	23	-	10	21	27	21	15	9	11	114
Idaho	-	-	-	-	-	-	-	-	-	-	5	15	51	40	48	36	21	23	24	258
Illinois	-	4	9	37	27	6	1	-	4	88	-	100	775	572	443	362	175	133	98	2,658
Indiana	7	19	44	31	11	11	7	2	5	130	445	75	278	243	196	119	67	52	65	1,095
Iowa	-	-	-	-	-	-	-	-	-	-	40	26	163	123	89	89	60	43	100	693
Kansas	8	14	49	19	20	8	9	3	3	125	284	11	75	56	53	46	39	29	56	365
Kentucky	-	6	47	19	10	8	-	-	-	90	-	25	214	183	110	67	28	17	13	657
Louisiana	2	-	9	3	6	11	3	1	2	35	16	17	154	88	100	122	92	90	171	834
Maine	2	-	8	4	3	1	1	-	-	17	3	1	52	41	33	34	5	5	2	173
Maryland	8	12	95	49	30	21	8	5	6	226	3	49	178	150	133	104	80	53	113	860
Massachusetts	-	-	58	68	49	16	8	4	8	211	2	3	19	122	245	349	364	213	221	1,536
Michigan	-	1	55	40	37	43	21	6	20	223	-	5	104	168	229	396	296	259	521	1,978
Minnesota	-	26	65	35	15	8	-	-	-	149	-	66	203	124	81	33	17	9	21	554
Mississippi	-	6	15	11	4	5	-	-	-	41	1	23	167	145	137	77	35	25	77	686
Missouri	5	-	13	41	87	45	26	38	66	316	354	-	11	37	71	97	90	98	293	697
Montana	-	-	-	-	-	-	-	-	-	-	41	2	27	23	22	17	11	11	19	132
Nebraska	-	-	1	2	8	5	2	-	-	18	86	6	18	35	50	51	42	43	86	331
Nevada	-	20	21	8	1	1	-	-	-	50	-	35	95	41	26	14	7	4	8	230
New Hampshire	-	6	31	1	2	-	-	-	-	40	-	6	71	35	17	16	4	12	11	172
New Jersey	1	1	101	91	63	25	19	7	6	313	64	2	144	242	233	175	77	71	305	1,249
New Mexico	8	-	-	3	-	-	-	-	-	3	24	27	87	95	82	79	50	32	57	509
New York	26	36	244	136	114	111	53	29	45	768	136	15	306	299	271	181	157	168	939	2,336
North Carolina	-	6	133	48	32	37	18	5	4	283	-	12	338	321	253	172	107	48	115	1,366
North Dakota	-	-	-	-	-	-	-	-	-	-	-	4	34	35	31	20	17	11	11	163
Ohio	-	87	168	68	34	23	8	2	3	393	-	93	480	441	338	235	151	100	138	1,976
Oklahoma	9	11	54	21	25	11	7	4	3	136	218	16	64	80	77	93	76	74	110	590
Oregon	-	-	5	20	26	3	1	-	-	55	17	4	61	148	191	130	45	29	28	636
Pennsylvania	12	28	136	124	81	50	32	21	7	479	31	23	303	433	429	462	253	152	180	2,235
Rhode Island	-	-	25	24	12	5	3	1	-	70	-	-	15	67	102	68	41	29	29	351
South Carolina	-	7	33	15	5	9	1	-	1	71	-	8	199	198	105	80	43	23	49	705
South Dakota	-	-	-	-	-	-	-	-	-	-	95	-	6	1	10	10	1	7	2	37
Tennessee	1	15	65	17	8	9	1	3	1	119	84	159	540	239	142	75	36	19	27	1,237
Texas	18	47	317	347	253	109	22	10	6	1,111	395	54	705	1,001	878	591	386	285	587	4,487
Utah	-	1	7	-	-	-	-	-	-	8	27	19	82	60	35	17	13	9	16	251
Vermont	-	-	4	8	2	1	4	-	-	19	-	-	24	18	20	14	7	5	9	97
Virginia	35	-	58	83	27	11	4	4	2	189	45	1	161	254	217	150	77	71	75	1,006
Washington	5	35	118	64	42	24	10	8	7	308	802	15	79	70	46	30	24	11	17	292
West Virginia	-	2	2	1	2	2	-	-	-	9	-	11	63	57	25	26	11	5	6	204
Wisconsin	-	13	72	47	36	19	4	2	1	194	1	39	176	222	213	192	168	123	169	1,302
Wyoming	-	-	1	-	2	-	-	-	-	3	12	51	72	31	14	16	5	6	2	197
U.S. Total	167	691	2,826	2,020	1,532	975	408	231	276	8,959	4,126	2,686	9,541	8,354	7,499	6,529	4,440	3,594	6,288	48,931
Puerto Rico	2	-	-	11	5	12	14	7	4	53	49	-	-	17	30	51	42	27	26	193
GRAND TOTAL	169	691	2,826	2,031	1,537	987	422	238	280	9,012	4,175	2,686	9,541	8,371	7,529	6,580	4,482	3,621	6,314	49,124

For footnotes, see Footnotes Page.

FUNCTIONAL SYSTEM LENGTH - 2001

MILES BY MEASURED PAVEMENT ROUGHNESS

HM-64 Footnotes Page:

1/ Data are reported as the International Roughness Index (IRI) in inches per mile. Reference: World Bank Technical Paper Number 46, 1986. Lower IRI represents smoother riding roadways; to obtain a comprehensive assessment of pavement condition, additional measures of pavement distress are needed.

2/ May include sections entirely on structures and unpaved miles.

3/ Estimated from sample data.