

**NATIONAL HIGHWAY SYSTEM LENGTH - 2002
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL**

TABLE HM-47
SHEET 1 OF 4

OCTOBER 2003

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	INTERSTATE SYSTEM										OTHER									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	258	260	45	31	10	-	-	-	604	-	465	1,219	318	41	7	2	-	-	2,052
Alaska	-	31	348	328	190	132	-	-	-	1,029	422	28	202	116	119	61	6	4	1	537
Arizona	-	796	191	10	-	-	-	-	-	997	10	400	394	195	68	53	8	8	-	1,126
Arkansas	5	106	175	50	29	30	34	25	11	460	167	10	522	541	262	166	71	34	12	1,618
California	-	55	551	369	136	143	51	31	22	1,358	3	51	1,041	1,095	848	438	119	50	22	3,664
Colorado	-	-	201	261	195	48	45	11	9	770	-	121	947	436	206	51	38	26	17	1,842
Connecticut	-	2	30	9	-	1	-	-	-	42	-	6	52	36	49	10	3	1	1	158
Delaware	-	-	-	-	-	-	-	-	-	-	-	5	106	64	20	3	3	2	1	204
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	-	800	137	-	14	-	-	-	-	951	-	926	675	137	33	4	10	-	1	1,786
Georgia	-	541	229	32	4	-	-	-	-	806	-	1,235	1,135	144	21	4	2	1	-	2,542
Hawaii	-	-	-	-	6	-	-	-	-	6	-	-	17	51	32	46	15	-	1	162
Idaho	-	31	351	95	29	12	2	5	1	526	-	75	862	435	195	84	8	1	1	1,661
Illinois	-	335	833	246	62	34	-	-	-	1,510	-	59	672	477	356	162	78	25	9	1,838
Indiana	-	117	562	115	44	14	-	-	-	852	5	319	581	248	110	25	30	7	1	1,321
Iowa	-	71	322	151	59	21	4	4	2	634	-	246	756	417	244	187	93	56	39	2,038
Kansas	-	284	335	62	10	-	-	3	2	696	2	763	1,576	233	36	10	5	3	3	2,629
Kentucky	6	238	144	26	76	43	-	-	-	527	-	307	973	238	148	74	1	1	-	1,742
Louisiana	54	106	162	118	105	37	22	-	7	557	34	87	378	216	150	184	69	62	20	1,166
Maine	-	88	182	39	3	1	-	-	-	313	-	132	492	126	30	4	1	2	-	787
Maryland	1	16	162	40	7	1	1	-	-	227	10	71	322	95	38	9	5	3	6	549
Massachusetts	-	-	69	62	6	24	-	-	1	162	-	-	58	107	78	35	23	9	16	326
Michigan	-	10	239	159	143	115	57	14	5	742	-	225	872	590	253	220	79	30	47	2,316
Minnesota	-	128	326	200	15	12	-	-	-	681	-	868	1,145	406	128	31	7	3	-	2,588
Mississippi	-	75	223	101	105	19	21	8	5	557	-	69	874	295	275	64	28	10	3	1,618
Missouri	-	160	267	229	120	27	3	-	-	806	4	145	808	697	555	230	102	29	28	2,594
Montana	-	303	626	116	54	20	15	-	1	1,135	7	242	1,719	453	119	65	6	9	3	2,616
Nebraska	-	234	78	50	47	28	-	-	-	437	-	335	816	393	340	149	100	80	39	2,252
Nevada	-	398	48	23	11	-	-	-	-	480	-	1,110	315	10	1	-	-	-	-	1,437
New Hampshire	-	30	143	3	-	-	-	-	-	176	-	18	254	116	28	16	16	-	7	455
New Jersey	-	2	55	27	8	7	10	6	4	119	9	3	225	162	73	54	10	3	4	534
New Mexico	-	528	334	22	8	-	-	-	-	892	-	802	630	158	78	43	16	22	5	1,754
New York	15	116	542	110	49	55	26	27	6	931	22	133	1,157	292	107	49	15	19	26	1,798
North Carolina	-	35	331	127	43	64	18	13	19	650	-	148	1,158	493	247	109	57	20	7	2,239
North Dakota	-	265	187	65	13	-	-	-	-	530	-	442	954	453	197	32	5	5	-	2,088
Ohio	-	527	237	48	15	-	-	-	2	829	-	496	1,034	235	63	16	3	3	2	1,852
Oklahoma	-	163	304	136	80	35	3	-	1	722	-	151	853	457	339	170	91	20	39	2,120
Oregon	-	29	223	284	35	10	1	-	-	582	13	3	529	1,158	803	145	23	7	3	2,671
Pennsylvania	1	192	637	248	83	25	13	6	2	1,206	2	179	920	584	341	143	60	30	11	2,268
Rhode Island	-	-	16	5	-	-	-	-	-	21	-	-	9	26	18	5	6	1	-	65
South Carolina	-	238	270	96	39	5	-	6	28	682	-	88	831	269	68	24	6	4	15	1,305
South Dakota	1	28	374	177	18	28	3	-	-	628	113	162	642	524	286	251	148	35	37	2,085
Tennessee	-	554	173	3	3	1	1	-	-	735	9	588	742	114	43	17	5	1	-	1,510
Texas	-	326	1,347	372	131	14	-	6	1	2,197	5	380	3,262	1,981	660	152	40	17	4	6,496
Utah	-	203	310	105	54	39	38	7	15	771	62	56	470	260	113	38	10	2	3	952
Vermont	-	84	147	30	6	9	-	4	-	280	-	23	128	57	44	30	13	12	12	319
Virginia	-	65	606	50	2	6	-	-	-	729	1	68	785	388	116	95	42	5	3	1,502
Washington	-	171	204	90	33	4	-	-	-	502	10	347	1,106	418	160	53	10	4	3	2,101
West Virginia	-	98	237	33	56	23	2	6	-	455	-	131	435	296	131	41	20	13	11	1,078
Wisconsin	1	160	300	79	25	14	-	-	-	578	-	634	1,122	521	205	89	34	14	10	2,629
Wyoming	-	287	435	50	31	22	2	-	-	827	-	925	887	115	9	16	5	-	-	1,957
U.S. Total	84	9,284	14,463	5,096	2,233	1,133	372	182	144	32,907	915	14,077	37,662	17,646	8,884	3,965	1,547	693	473	84,947
Puerto Rico	-	-	2	19	55	22	5	5	4	112	2	-	-	4	15	12	4	5	-	40
Grand Total	84	9,284	14,465	5,115	2,288	1,155	377	187	148	33,019	917	14,077	37,662	17,650	8,899	3,977	1,551	698	473	84,987

For footnotes, see Footnotes Page.

NATIONAL HIGHWAY SYSTEM LENGTH - 2002
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL

TABLE HM-47
SHEET 2 OF 4

OCTOBER 2003

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	TOTAL RURAL NHS									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	723	1,479	363	72	17	2	-	-	2,656
Alaska	422	59	550	444	309	192	6	4	1	1,565
Arizona	10	1,196	585	205	68	53	8	8	-	2,123
Arkansas	172	116	697	591	291	196	105	59	23	2,078
California	3	106	1,592	1,463	984	582	170	81	44	5,022
Colorado	-	121	1,147	697	401	98	83	37	25	2,609
Connecticut	-	7	82	46	49	11	3	1	1	200
Delaware	-	5	106	64	20	3	3	2	1	204
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-
Florida	-	1,726	812	137	47	4	10	-	1	2,737
Georgia	-	1,775	1,364	176	25	4	2	1	-	3,347
Hawaii	-	-	17	51	39	46	15	-	1	169
Idaho	-	106	1,213	530	224	96	10	6	1	2,186
Illinois	-	394	1,505	723	418	196	78	25	9	3,348
Indiana	5	437	1,143	363	154	39	30	7	1	2,174
Iowa	5	317	1,079	568	303	208	97	60	40	2,672
Kansas	2	1,048	1,911	295	46	10	5	6	5	3,326
Kentucky	6	544	1,117	265	224	118	1	1	-	2,270
Louisiana	88	193	540	334	255	220	91	62	27	1,722
Maine	-	220	674	166	33	5	1	2	1	1,102
Maryland	11	88	484	134	44	11	6	4	6	777
Massachusetts	-	-	127	168	83	59	23	9	17	486
Michigan	-	235	1,111	749	396	334	136	45	52	3,058
Minnesota	-	996	1,472	607	142	42	7	3	-	3,269
Mississippi	-	144	1,097	396	380	83	49	18	8	2,175
Missouri	4	305	1,076	926	675	257	105	29	28	3,401
Montana	7	545	2,345	569	173	85	21	9	4	3,751
Nebraska	-	569	893	443	387	177	100	81	39	2,689
Nevada	-	1,508	362	33	11	1	-	-	-	1,915
New Hampshire	-	48	397	119	28	16	16	-	7	631
New Jersey	9	6	280	190	81	61	19	9	8	654
New Mexico	-	1,330	964	179	86	43	16	22	5	2,645
New York	37	249	1,699	403	157	104	41	46	32	2,731
North Carolina	-	183	1,489	620	290	173	75	33	26	2,889
North Dakota	-	708	1,141	518	210	32	5	5	-	2,619
Ohio	-	1,024	1,270	283	78	16	3	3	4	2,681
Oklahoma	-	314	1,158	592	419	206	95	20	40	2,844
Oregon	13	32	751	1,442	838	156	24	7	3	3,253
Pennsylvania	3	371	1,558	832	423	167	73	35	13	3,472
Rhode Island	-	-	25	31	18	5	6	1	-	86
South Carolina	-	326	1,101	365	107	29	6	10	42	1,986
South Dakota	114	190	1,016	702	304	279	150	35	37	2,713
Tennessee	9	1,142	914	117	45	18	6	1	-	2,243
Texas	5	706	4,609	2,354	791	166	40	23	5	8,694
Utah	62	259	780	365	167	78	47	9	17	1,722
Vermont	-	107	275	88	50	39	13	15	12	599
Virginia	1	132	1,391	438	118	102	42	5	3	2,231
Washington	10	518	1,310	508	193	56	10	4	3	2,602
West Virginia	-	229	672	329	187	64	23	19	11	1,534
Wisconsin	1	794	1,422	601	231	103	34	14	10	3,209
Wyoming	-	1,212	1,323	165	40	39	7	-	-	2,786
U.S. Total	999	23,363	52,125	22,747	11,114	5,099	1,918	876	613	117,855
Puerto Rico	2	-	2	23	70	34	9	10	4	152
Grand Total	1,001	23,363	52,127	22,770	11,184	5,133	1,927	886	617	118,007

For footnotes, see Footnotes Page.

**NATIONAL HIGHWAY SYSTEM LENGTH - 2002
MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN**

OCTOBER 2003

TABLE HM-47

SHEET 3 OF 4

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	INTERSTATE SYSTEM										OTHER									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	74	120	41	33	30	3	-	-	301	-	213	374	80	42	8	3	-	1	721
Alaska	-	14	25	5	4	3	1	-	-	52	-	8	14	19	15	5	5	1	3	70
Arizona	-	83	46	31	9	1	1	1	-	172	29	30	139	96	73	33	14	4	1	390
Arkansas	1	9	60	35	30	22	14	12	7	189	44	1	35	51	31	37	16	11	18	200
California	-	30	180	170	225	250	132	77	33	1,097	2	3	202	283	356	299	156	91	118	1,508
Colorado	-	1	50	52	36	28	16	-	2	185	1	9	133	162	115	69	32	75	37	632
Connecticut	-	7	134	84	40	21	8	5	4	303	-	15	107	137	78	56	33	13	21	460
Delaware	1	5	16	13	2	2	1	1	-	40	-	1	31	21	7	3	1	1	2	67
Dist. of Columbia	-	6	-	-	-	2	1	1	2	12	-	-	-	-	3	3	10	4	51	71
Florida	6	269	194	26	16	8	1	-	-	514	5	382	494	90	65	10	16	6	15	1,078
Georgia	1	298	120	18	2	-	-	-	-	438	-	346	360	91	37	8	3	1	1	847
Hawaii	-	-	7	3	10	10	10	5	4	49	1	-	14	20	27	33	14	6	14	128
Idaho	-	2	52	12	10	1	4	5	-	86	7	3	25	24	17	8	6	4	5	92
Illinois	1	63	224	164	123	30	51	1	1	657	-	25	343	362	299	246	93	87	231	1,686
Indiana	-	10	145	77	51	24	7	2	1	317	7	26	103	93	63	49	21	8	15	378
Iowa	-	8	46	29	23	19	11	5	6	147	27	14	88	60	48	33	28	25	40	336
Kansas	-	11	75	63	23	5	1	-	-	178	4	27	90	41	21	22	13	9	16	239
Kentucky	-	81	88	19	33	-	5	3	-	229	-	17	205	73	46	22	16	4	8	391
Louisiana	55	28	35	62	52	38	12	6	4	237	14	15	104	61	53	60	55	56	82	486
Maine	-	2	44	8	1	-	-	-	-	55	-	2	62	43	12	11	3	2	1	136
Maryland	9	10	125	53	24	10	6	8	5	241	9	30	149	80	54	30	19	16	27	405
Massachusetts	-	2	195	125	29	42	7	3	-	403	13	-	74	118	145	200	193	142	187	1,059
Michigan	1	3	106	142	82	68	45	18	35	499	-	4	130	152	188	177	144	117	263	1,175
Minnesota	-	26	114	52	26	7	7	-	-	232	-	67	169	112	66	27	6	2	13	462
Mississippi	-	-	35	37	34	18	5	-	-	129	-	12	117	38	50	37	9	6	14	283
Missouri	-	20	166	76	50	36	15	6	4	373	24	7	61	75	109	85	72	67	116	592
Montana	-	1	28	11	8	4	2	1	-	55	-	1	13	15	11	8	4	5	5	62
Nebraska	-	3	19	5	10	4	2	1	1	45	8	4	9	25	39	44	29	33	49	232
Nevada	-	30	15	11	6	15	2	-	-	79	-	52	55	12	8	2	1	2	2	134
New Hampshire	-	12	29	7	-	-	-	-	-	48	-	16	70	13	8	3	-	-	6	116
New Jersey	7	1	80	105	30	39	26	14	10	305	27	2	214	299	241	102	62	38	115	1,073
New Mexico	-	29	46	19	4	3	6	-	1	108	5	31	62	39	19	16	6	5	19	197
New York	19	50	317	118	63	51	30	32	48	709	75	34	366	271	224	182	113	86	298	1,574
North Carolina	-	17	159	80	42	32	9	8	22	369	-	3	170	150	75	51	24	11	12	496
North Dakota	-	19	14	6	2	-	-	-	-	41	-	3	20	18	12	8	4	2	-	67
Ohio	-	351	298	64	18	7	5	-	1	744	-	172	321	172	113	74	27	25	32	936
Oklahoma	-	12	63	29	34	21	19	17	13	208	4	22	104	48	43	32	27	14	11	301
Oregon	1	5	30	58	40	8	4	-	-	145	6	1	39	98	89	41	19	15	17	319
Pennsylvania	13	36	239	156	61	22	14	6	5	539	8	43	324	302	292	204	121	89	64	1,439
Rhode Island	-	-	28	15	5	-	1	-	-	49	-	-	27	43	29	17	9	2	5	132
South Carolina	-	31	77	26	9	3	1	-	14	161	-	12	162	118	62	53	23	13	31	474
South Dakota	-	1	13	18	8	8	-	-	-	48	44	-	2	2	6	2	1	4	-	17
Tennessee	-	149	138	29	12	5	5	1	1	340	6	119	294	96	59	34	16	12	13	643
Texas	-	48	367	303	205	83	27	4	-	1,037	137	75	814	853	730	469	212	114	255	3,522
Utah	-	34	45	45	34	8	3	-	-	169	28	23	84	55	17	11	3	-	2	195
Vermont	-	6	20	4	2	7	1	-	-	40	-	-	13	6	14	7	5	2	8	55
Virginia	1	7	140	128	71	29	11	1	2	389	33	2	209	226	150	91	66	36	47	827
Washington	1	87	92	27	17	24	8	3	3	261	115	51	201	89	56	31	13	10	13	464
West Virginia	-	23	49	8	5	4	4	1	-	94	-	10	44	25	13	13	6	2	4	117
Wisconsin	4	22	75	37	13	12	3	-	-	162	1	24	141	135	130	117	71	60	65	743
Wyoming	-	25	30	12	12	5	2	1	-	87	-	36	25	11	3	2	1	-	-	79
U.S. Total	123	2,061	4,813	2,718	1,679	1,069	549	249	229	13,367	684	1,993	7,406	5,503	4,463	3,185	1,844	1,339	2,373	28,106
Puerto Rico	1	-	1	35	47	43	12	10	3	151	5	-	-	16	12	24	21	7	12	92
Grand Total	124	2,061	4,814	2,753	1,726	1,112	561	259	232	13,518	689	1,993	7,406	5,519	4,475	3,209	1,865	1,346	2,385	28,198

For footnotes, see Footnotes Page.

NATIONAL HIGHWAY SYSTEM LENGTH - 2002
MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-47
SHEET 4 OF 4

OCTOBER 2003

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	TOTAL URBAN NHS									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	287	494	120	75	39	6	-	1	1,022
Alaska	-	23	39	25	19	8	6	1	3	124
Arizona	30	112	186	126	81	35	14	5	1	560
Arkansas	45	9	95	86	61	59	30	23	25	388
California	4	33	381	453	580	549	288	168	151	2,603
Colorado	1	10	183	214	150	97	48	75	39	816
Connecticut	-	23	241	221	118	77	40	17	25	762
Delaware	1	6	47	34	9	5	2	2	3	108
Dist. of Columbia	-	6	-	-	3	5	11	5	52	82
Florida	12	651	688	116	81	18	17	6	15	1,592
Georgia	1	645	480	109	39	8	3	1	1	1,286
Hawaii	1	-	21	23	37	42	24	11	17	175
Idaho	7	6	77	36	28	9	9	8	5	178
Illinois	1	88	568	526	422	276	144	88	233	2,345
Indiana	7	36	248	170	114	73	29	10	15	695
Iowa	27	21	134	90	71	52	38	30	46	482
Kansas	4	39	165	104	44	26	13	9	16	416
Kentucky	-	98	294	92	79	22	21	7	8	621
Louisiana	68	43	139	123	104	98	67	62	86	722
Maine	-	4	105	50	13	11	3	2	1	189
Maryland	19	40	275	133	78	40	26	24	32	648
Massachusetts	13	2	269	243	174	242	200	145	187	1,462
Michigan	1	7	235	294	270	245	189	135	298	1,673
Minnesota	-	92	283	164	93	34	13	2	13	694
Mississippi	-	12	152	75	83	55	14	7	14	412
Missouri	24	26	228	151	160	121	88	73	121	968
Montana	-	2	41	26	19	12	7	5	5	117
Nebraska	8	7	28	30	49	48	32	34	50	278
Nevada	-	82	71	23	14	17	3	2	2	214
New Hampshire	-	28	99	20	8	3	-	-	6	164
New Jersey	35	4	294	404	270	141	87	52	125	1,377
New Mexico	5	60	108	58	23	19	12	5	20	305
New York	93	84	683	388	287	234	143	118	346	2,283
North Carolina	-	21	329	229	117	83	33	19	35	866
North Dakota	-	22	34	24	15	8	4	2	-	109
Ohio	-	523	619	236	131	81	31	25	33	1,679
Oklahoma	4	34	167	76	77	53	46	31	24	508
Oregon	7	6	69	156	129	49	23	15	17	464
Pennsylvania	21	79	563	457	353	226	135	95	69	1,977
Rhode Island	-	-	56	58	34	17	10	2	6	183
South Carolina	-	44	239	144	71	56	24	13	45	636
South Dakota	45	1	15	20	14	10	1	4	-	65
Tennessee	6	268	432	125	71	39	21	13	13	982
Texas	137	123	1,181	1,156	934	553	239	118	255	4,559
Utah	28	57	130	99	51	19	6	-	2	364
Vermont	-	6	34	10	16	14	6	2	8	96
Virginia	34	9	349	354	221	120	76	38	49	1,216
Washington	115	138	293	116	74	56	21	13	16	727
West Virginia	-	34	93	33	18	17	10	3	5	213
Wisconsin	5	46	216	172	142	129	74	60	65	904
Wyoming	-	61	54	23	16	7	3	3	-	167
U.S. Total	809	4,058	12,224	8,215	6,140	4,257	2,390	1,588	2,604	41,476
Puerto Rico	5	-	1	51	58	67	33	16	15	241
Grand Total	814	4,058	12,225	8,266	6,198	4,324	2,423	1,604	2,619	41,717

For footnotes, see Footnotes Page.

NATIONAL HIGHWAY SYSTEM LENGTH - 2002

MILES BY MEASURED PAVEMENT ROUGHNESS

HM-47 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.