

FUNCTIONAL SYSTEM LENGTH - 1996
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL

TABLE HM-64
SHEET 1 OF 4

OCTOBER 1997

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	-	67	373	96	42	21	-	-	-	599
Alaska	-	1	310	292	276	54	81	14	5	1,033
Arizona	-	507	371	79	13	24	1	-	1	996
Arkansas	9	-	52	44	85	88	55	45	22	391
California	-	7	573	284	277	124	40	13	27	1,345
Colorado	-	15	159	201	129	87	105	37	35	768
Connecticut	-	-	52	24	16	4	4	1	-	101
Delaware	-	-	-	-	-	-	-	-	-	-
Dist. of Columbia 3/	-	-	-	-	-	-	-	-	-	-
Florida	186	138	227	171	224	9	3	-	-	772
Georgia	605	90	98	13	1	-	-	-	-	202
Hawaii	-	-	-	-	-	-	-	-	-	-
Idaho	-	171	273	39	22	10	11	3	3	532
Illinois	-	55	554	414	293	175	28	2	-	1,521
Indiana	-	51	485	182	57	73	-	5	-	853
Iowa	1	34	238	234	80	42	5	-	-	633
Kansas	2	156	343	103	45	49	-	-	-	696
Kentucky	-	173	172	56	85	50	-	-	-	536
Louisiana	-	15	255	162	72	83	17	6	1	611
Maine	49	96	154	12	2	-	-	-	-	264
Maryland 3/	-	38	145	36	7	-	1	-	-	227
Massachusetts	-	-	94	50	14	-	2	1	1	162
Michigan	-	70	287	186	122	43	23	8	1	740
Minnesota	-	4	179	187	158	110	32	11	-	681
Mississippi	-	11	232	141	69	75	20	5	5	558
Missouri	-	38	379	299	81	10	1	1	-	809
Montana	-	196	509	164	132	93	26	12	5	1,137
Nebraska	-	166	72	96	79	24	-	-	-	437
Nevada	-	198	152	48	29	35	13	3	2	480
New Hampshire	-	25	148	3	-	-	-	-	-	176
New Jersey	7	-	10	32	40	17	9	3	1	112
New Mexico	-	18	402	209	158	69	26	8	2	892
New York	3	8	422	221	71	34	17	3	18	794
North Carolina	-	4	60	154	189	128	85	19	-	639
North Dakota	-	6	147	221	93	36	28	-	-	531
Ohio	-	208	468	129	23	2	-	-	-	830
Oklahoma 4/	-	-	226	237	154	68	25	11	-	721
Oregon	-	18	245	249	57	11	2	-	-	582
Pennsylvania	5	63	456	308	193	77	42	28	35	1,202
Rhode Island	9	-	1	4	4	2	1	-	-	12
South Carolina	3	114	305	172	69	8	-	-	-	668
South Dakota	-	68	119	151	203	59	29	-	-	629
Tennessee	641	20	54	12	12	-	-	-	-	98
Texas	-	1,601	528	48	14	1	-	-	12	2,204
Utah	-	359	293	88	30	1	-	-	-	771
Vermont	-	67	143	57	3	10	-	-	-	280
Virginia	-	6	360	280	54	9	3	-	-	712
Washington	-	-	114	189	137	36	13	3	9	501
West Virginia	-	66	136	80	110	34	32	1	-	459
Wisconsin	-	43	204	226	76	20	4	2	-	575
Wyoming	-	156	438	152	56	24	-	-	-	826
U.S. Total	1,520	5,147	12,017	6,835	4,156	1,929	784	245	185	31,298
Puerto Rico	10	-	-	11	39	32	7	-	3	92
Grand Total	1,530	5,147	12,017	6,846	4,195	1,961	791	245	188	31,390

FUNCTIONAL SYSTEM LENGTH - 1996
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL

OCTOBER 1997

TABLE HM-64
 SHEET 2 OF 4

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	OTHER PRINCIPAL ARTERIAL										MINOR ARTERIAL									
	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	-	45	1,129	668	166	43	6	2	7	2,066	-	76	1,464	1,277	661	174	52	-	-	3,704
Alaska	455	-	66	134	105	32	8	3	7	355	281	-	44	14	57	9	37	-	-	161
Arizona	-	154	471	253	177	85	25	21	-	1,186	-	156	268	382	271	85	44	30	22	1,258
Arkansas	100	11	617	661	410	244	115	29	13	2,100	124	-	694	831	484	497	308	45	6	2,865
California	-	31	941	1,000	1,179	403	82	48	3	3,687	-	359	1,261	1,788	1,504	1,177	338	227	250	6,904
Colorado	-	11	313	387	513	314	116	179	370	2,203	-	-	390	673	287	816	491	328	690	3,675
Connecticut	5	-	48	87	59	34	16	9	5	258	36	-	1	109	214	28	48	45	17	462
Delaware	-	1	49	61	44	18	15	10	18	216	-	-	45	23	17	5	3	8	4	105
Dist. of Columbia 3/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	421	94	966	777	943	303	121	57	36	3,297	268	69	976	377	417	257	54	62	106	2,318
Georgia	2,658	110	24	1	-	-	-	-	-	135	3,905	1,107	562	-	-	-	-	-	-	1,669
Hawaii	119	-	-	-	1	2	2	1	-	6	324	-	-	-	8	41	-	-	1	50
Idaho	-	421	613	448	137	28	16	19	2	1,684	-	285	387	387	126	91	7	13	-	1,296
Illinois	-	57	636	758	512	309	203	110	53	2,638	-	408	1,023	1,110	831	812	193	218	219	4,814
Indiana	19	3	550	410	417	165	63	32	40	1,680	8	44	788	631	150	310	90	67	146	2,226
Iowa	165	226	841	487	677	645	270	100	2	3,248	226	406	691	573	711	785	209	295	57	3,727
Kansas	79	612	1,499	600	217	104	37	19	4	3,092	23	167	2,279	684	872	31	151	44	50	4,278
Kentucky	-	243	1,174	328	228	31	3	4	1	2,012	-	53	773	541	174	80	-	-	-	1,621
Louisiana	-	89	415	237	153	199	78	28	15	1,214	-	10	614	430	132	263	42	27	105	1,623
Maine	8	118	411	149	47	28	13	8	5	779	36	72	377	269	161	76	21	38	20	1,034
Maryland 3/	-	43	295	122	38	21	19	5	6	549	-	46	247	404	175	34	24	9	11	950
Massachusetts	10	-	71	105	64	36	16	9	8	309	372	-	15	94	54	16	33	49	32	293
Michigan	12	251	1,203	590	391	164	111	11	22	2,743	-	363	1,681	608	559	413	187	121	92	4,024
Minnesota	-	132	1,118	839	643	374	216	157	94	3,573	-	115	2,668	1,252	1,030	325	638	262	81	6,371
Mississippi	-	28	647	489	470	152	33	15	5	1,839	-	6	1,042	1,344	933	436	104	37	8	3,910
Missouri	15	77	869	1,231	597	206	43	8	6	3,037	-	36	1,146	1,369	409	328	85	25	-	3,398
Montana	-	245	1,289	573	272	161	62	15	5	2,622	13	237	1,469	604	427	124	55	49	12	2,977
Nebraska	13	655	911	373	342	142	146	92	55	2,716	-	692	1,380	469	485	624	109	254	185	4,198
Nevada	-	173	533	217	238	160	33	28	7	1,389	-	122	174	148	183	27	56	-	5	715
New Hampshire	-	-	253	139	41	11	3	-	7	454	-	8	234	166	50	24	5	3	-	490
New Jersey	89	-	20	26	205	155	28	10	-	444	61	-	4	13	217	65	83	10	35	427
New Mexico	48	48	790	293	234	155	89	47	93	1,749	86	18	424	468	225	98	262	43	250	1,788
New York	11	18	737	552	313	133	76	76	84	1,989	33	25	848	1,690	892	244	152	214	18	4,083
North Carolina	41	7	406	483	561	376	171	88	80	2,172	108	22	185	604	690	785	356	149	100	2,891
North Dakota	34	31	554	579	760	524	345	87	16	2,896	-	23	250	628	606	433	289	180	104	2,513
Ohio	-	277	1,465	290	101	46	28	2	7	2,216	-	290	2,034	353	62	32	12	59	-	2,842
Oklahoma 4/	-	13	650	614	484	311	113	99	83	2,367	-	-	574	742	871	391	85	80	7	2,750
Oregon	-	89	398	1,053	782	366	89	22	31	2,830	-	-	183	447	669	501	129	88	29	2,046
Pennsylvania	7	30	637	642	535	340	151	71	66	2,472	5,116	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	2	20	10	8	5	1	17	63	-	-	10	16	17	14	5	7	11	80
South Carolina	16	27	791	297	177	111	17	6	4	1,430	-	70	1,400	1,270	704	182	13	16	6	3,661
South Dakota	53	305	323	442	572	540	181	106	20	2,489	15	314	393	402	701	907	363	153	92	3,325
Tennessee	1,592	16	108	41	33	9	8	-	-	215	6	49	1,420	848	429	476	188	-	-	3,410
Texas	96	3,149	2,749	540	144	41	20	10	6	6,659	133	3,530	4,402	953	333	84	11	8	-	9,321
Utah	-	257	617	90	20	13	2	8	1	1,008	-	264	850	355	46	8	1	11	-	1,535
Vermont	-	10	73	59	67	59	25	13	11	317	-	48	146	128	103	86	140	41	42	734
Virginia	-	4	451	509	358	156	24	12	20	1,534	-	-	491	1,196	1,213	440	23	51	18	3,432
Washington	-	-	305	631	548	391	163	45	3	2,086	23	-	186	268	348	556	355	166	79	1,958
West Virginia	-	103	353	240	196	109	34	10	7	1,052	-	130	550	401	208	152	47	42	34	1,564
Wisconsin	43	241	1,209	818	486	322	132	77	30	3,315	-	189	1,530	949	861	707	557	218	-	5,011
Wyoming	24	95	679	429	184	132	58	22	9	1,608	4	25	376	596	209	347	81	36	1	1,671
U.S. Total	6,133	8,550	31,269	20,772	15,851	8,711	3,630	1,831	1,384	91,998	11,201	9,834	38,949	28,884	20,778	14,354	6,549	3,865	2,945	126,158
Puerto Rico	39	-	-	3	9	19	17	3	11	62	162	-	-	-	1	37	53	32	8	131
Grand Total	6,172	8,550	31,269	20,775	15,860	8,730	3,647	1,834	1,395	92,060	11,363	9,834	38,949	28,884	20,779	14,391	6,602	3,897	2,953	126,289

FUNCTIONAL SYSTEM LENGTH - 1996
MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-64
SHEET 3 OF 4

OCTOBER 1997

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	NOT REPORTED 2/	INTERSTATE								TOTAL REPORTED
		< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	
Alabama	-	18	129	72	45	36	5	-	-	305
Alaska	-	-	21	22	8	-	1	-	-	53
Arizona	-	59	61	37	11	3	2	-	-	173
Arkansas	6	4	9	25	28	35	17	11	6	135
California	-	21	146	190	353	204	92	55	18	1,079
Colorado	-	2	50	32	55	24	12	11	-	186
Connecticut	11	1	78	67	42	18	11	7	8	232
Delaware	-	-	11	6	4	8	4	3	5	41
Dist. of Columbia 3/	-	-	6	-	2	2	-	2	1	13
Florida	108	40	147	72	116	20	6	1	3	405
Georgia	324	47	59	4	-	-	-	-	-	110
Hawaii	40	-	-	-	-	2	1	-	-	3
Idaho	-	20	26	17	13	2	1	-	-	79
Illinois	-	30	124	188	152	72	48	23	5	642
Indiana	2	23	100	84	43	24	31	9	3	317
Iowa	2	-	32	39	37	22	15	-	-	145
Kansas	5	17	68	65	15	4	-	-	-	169
Kentucky	-	36	74	45	36	27	7	1	-	226
Louisiana	-	6	71	83	89	13	8	6	6	282
Maine	3	13	36	3	-	-	-	-	-	52
Maryland 3/	-	14	131	58	21	9	10	5	7	255
Massachusetts	-	6	172	143	53	20	5	1	3	403
Michigan	-	23	189	117	88	49	19	12	2	499
Minnesota	-	13	114	51	28	20	6	-	-	232
Mississippi	-	-	9	28	61	19	7	2	1	127
Missouri	-	4	94	153	72	30	10	5	1	369
Montana	-	3	24	12	3	4	5	2	-	53
Nebraska	-	8	13	8	5	8	1	-	-	43
Nevada	-	16	25	15	12	11	3	1	-	83
New Hampshire	-	11	29	8	-	-	-	-	-	48
New Jersey	34	-	21	61	78	73	22	9	5	269
New Mexico	-	7	32	24	26	9	2	6	2	108
New York	20	3	200	170	93	70	45	54	47	682
North Carolina	1	-	41	52	110	53	47	26	12	341
North Dakota	-	-	9	17	8	5	1	-	-	40
Ohio	-	98	365	189	50	22	11	7	1	743
Oklahoma 4/	-	1	26	57	33	25	26	24	17	209
Oregon	-	1	31	63	43	6	1	1	-	146
Pennsylvania	22	3	126	162	116	62	28	16	8	521
Rhode Island	-	-	17	20	9	-	1	-	1	48
South Carolina	3	6	87	36	19	6	1	-	-	155
South Dakota	-	5	-	3	21	13	7	-	-	49
Tennessee	216	5	44	28	12	10	3	3	2	107
Texas	2	297	464	199	37	27	3	1	-	1,028
Utah	-	36	65	47	15	6	-	-	-	169
Vermont	-	5	23	11	-	1	-	-	-	40
Virginia	-	2	94	156	95	30	8	7	3	395
Washington	-	-	34	61	92	24	33	13	5	262
West Virginia	-	35	13	16	9	9	8	1	-	91
Wisconsin	-	2	34	41	51	23	5	12	2	170
Wyoming	-	3	28	25	22	8	-	-	1	87
U.S. Total	799	944	3,802	3,082	2,331	1,168	579	338	175	12,419
Puerto Rico	14	-	-	22	38	23	24	7	20	134
Grand Total	813	944	3,802	3,104	2,369	1,191	603	345	195	12,553

FUNCTIONAL SYSTEM LENGTH - 1996
MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

OCTOBER 1997

TABLE HM-64
 SHEET 4 OF 4

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	OTHER FREEWAYS AND EXPRESSWAYS										OTHER PRINCIPAL ARTERIAL									
	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	-	-	13	4	1	2	-	1	-	21	-	54	432	297	142	42	5	6	5	983
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	13	14	12	11	3	2	1	56
Arizona	-	16	39	28	5	3	-	-	-	91	-	202	500	106	106	50	34	11	19	1,028
Arkansas	8	4	22	12	19	18	14	11	4	104	85	1	64	108	97	83	41	34	67	495
California	-	26	237	266	455	225	70	34	21	1,334	-	724	1,029	506	2,231	556	277	169	362	5,854
Colorado	-	4	50	54	55	36	8	10	1	218	2	1	47	212	110	80	59	198	127	834
Connecticut	1	-	54	61	33	23	14	6	6	197	60	-	7	57	140	140	86	46	68	544
Delaware	-	1	1	2	1	-	-	-	6	11	-	-	23	30	28	18	8	8	20	135
Dist. of Columbia 3/	1	-	1	-	11	4	-	1	1	18	2	-	-	9	15	-	23	31	78	78
Florida	31	5	155	99	68	38	5	4	-	374	383	52	613	568	461	289	138	78	65	2,264
Georgia	146	12	3	1	-	-	-	-	-	16	1,729	16	8	-	-	-	-	-	-	24
Hawaii	26	-	-	2	-	3	-	-	-	8	114	-	-	-	2	8	-	2	1	21
Idaho	-	-	-	-	-	-	-	-	-	-	-	12	39	33	28	24	14	61	11	222
Illinois	-	2	13	15	10	19	2	5	9	75	-	24	173	388	425	391	335	249	617	2,602
Indiana	6	8	23	28	12	28	17	8	2	126	462	13	125	208	197	158	129	102	157	1,089
Iowa	-	-	-	-	-	-	-	-	-	-	434	12	53	51	64	56	20	11	6	273
Kansas	30	3	42	26	17	12	3	2	1	106	462	11	48	48	28	22	7	9	7	180
Kentucky	-	26	23	5	23	13	3	-	-	93	-	38	245	164	87	44	19	14	23	634
Louisiana	-	-	3	12	18	7	3	-	2	45	-	21	123	267	128	122	81	48	55	845
Maine	1	-	9	3	3	1	-	-	-	16	33	9	55	32	18	13	6	3	5	141
Maryland 3/	-	4	83	56	35	21	11	7	12	229	-	6	101	125	126	120	77	72	230	857
Massachusetts	16	-	67	70	26	14	4	4	4	189	677	-	31	125	182	162	103	83	188	874
Michigan	-	2	45	66	46	42	16	3	1	221	52	9	109	224	267	350	276	204	483	1,922
Minnesota	-	10	52	33	12	30	4	1	-	142	-	17	122	120	111	96	37	18	37	558
Mississippi	-	-	17	10	7	10	-	-	-	44	-	6	117	184	155	108	38	12	10	630
Missouri	29	-	24	76	80	46	17	6	10	259	476	-	42	120	127	83	39	58	639	
Montana	-	-	-	-	-	-	-	-	-	-	6	4	27	31	29	24	15	12	26	168
Nebraska	-	-	1	7	2	7	-	-	-	17	147	7	32	22	33	44	31	36	67	272
Nevada	-	5	18	9	1	-	2	-	-	35	2	7	61	70	40	20	12	9	16	235
New Hampshire	-	-	37	3	2	-	-	-	-	42	-	5	80	41	13	12	2	11	6	170
New Jersey	96	-	28	56	71	50	9	1	1	216	365	-	11	26	274	453	142	29	5	940
New Mexico	3	-	-	-	-	-	-	-	-	-	196	19	86	56	49	38	24	23	28	323
New York	53	6	162	144	101	118	80	62	98	771	182	2	240	385	309	256	171	133	838	2,334
North Carolina	28	-	44	38	44	43	36	14	25	244	247	-	142	159	243	214	128	65	162	1,113
North Dakota	-	-	-	-	-	-	-	-	-	-	13	2	14	23	23	13	20	29	151	151
Ohio	-	28	177	82	52	19	9	4	4	375	-	70	524	479	346	221	116	106	132	1,994
Oklahoma 4/	-	-	25	28	32	20	14	9	6	134	1	-	55	111	140	145	122	117	112	802
Oregon	-	-	7	23	19	2	-	2	-	53	-	9	30	95	187	113	72	47	75	628
Pennsylvania	11	7	58	83	104	94	61	28	27	462	31	11	146	256	327	523	260	249	468	2,240
Rhode Island	1	-	17	15	17	5	5	2	6	67	23	-	8	35	48	35	50	50	82	308
South Carolina	7	9	34	10	6	3	-	-	-	62	45	15	196	165	126	74	36	19	21	652
South Dakota	3	-	-	-	-	-	-	-	-	-	71	12	-	3	7	6	3	5	7	43
Tennessee	69	1	17	12	6	6	1	2	1	46	1,120	9	73	41	19	15	5	3	7	172
Texas	48	373	483	177	99	37	9	2	10	1,190	176	1,868	1,392	537	433	268	102	59	75	4,734
Utah	-	3	4	1	-	-	-	-	-	8	-	42	119	53	31	14	6	2	1	268
Vermont	-	-	10	5	1	2	1	-	-	19	-	2	9	17	18	18	9	8	16	97
Virginia	-	-	33	62	74	31	14	6	2	222	-	1	139	267	240	160	105	104	128	1,144
Washington	4	-	17	65	107	60	31	14	18	312	810	-	25	53	59	60	32	20	29	278
West Virginia	-	-	2	6	-	2	-	-	-	10	-	20	61	47	26	23	10	9	7	203
Wisconsin	1	11	34	36	39	29	18	7	4	178	75	7	125	163	197	215	169	128	232	1,236
Wyoming	-	-	3	-	-	-	-	-	-	3	23	8	41	50	36	21	8	6	12	182
U.S. Total	619	566	2,187	1,791	1,714	1,123	484	256	282	8,403	8,504	3,348	7,755	7,172	8,577	6,084	3,527	2,772	5,234	44,469
Puerto Rico	4	-	-	9	2	11	10	4	8	44	89	-	2	8	16	44	28	26	34	158
Grand Total	623	566	2,187	1,800	1,716	1,134	494	260	290	8,447	8,593	3,348	7,757	7,180	8,593	6,128	3,555	2,798	5,268	44,627

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/ Some States did not report for all required systems. Includes unpaved mileage in the following systems: rural Other

3/ 1995 data.

4/ Data estimated by FHWA.

Principal Arterial—455 miles in Alaska, 9 miles in Georgia, 12 miles in Michigan, and 10 miles in New Mexico; rural Minor Arterial—281 miles in Alaska.