

**NATIONAL HIGHWAY SYSTEM LENGTH - 2015  
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL**

TABLE HM-47  
SHEET 1 OF 4

DECEMBER 2016

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	1	363	141	34	20	7	3	1	2	571	4	901	819	149	69	33	17	10	10	2,007
Alaska	-	200	359	163	118	73	40	24	25	1,002	263	90	177	81	73	75	59	50	123	728
Arizona	1	497	290	75	32	11	4	2	4	916	32	419	447	152	84	43	17	8	6	1,175
Arkansas	0	194	137	41	18	8	5	3	3	409	2	261	859	380	219	130	60	33	32	1,974
California	-	614	383	118	51	21	9	5	9	1,209	-	953	1,504	542	270	161	64	46	87	3,625
Colorado	-	141	252	129	58	30	21	9	9	648	-	516	1,080	501	249	120	57	27	26	2,576
Connecticut	-	12	10	4	2	0	0	0	0	29	-	10	40	27	24	20	12	6	10	150
Delaware	-	-	-	-	-	-	-	-	-	-	2	47	85	17	3	1	1	0	0	154
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	105	376	206	18	8	3	1	0	0	612	81	1,009	1,266	267	80	28	7	4	3	2,663
Georgia	1	239	201	55	22	10	4	2	2	534	19	908	1,585	388	135	53	21	10	15	3,114
Hawaii	-	-	-	-	-	-	-	-	-	-	-	1	19	14	13	15	8	6	5	80
Idaho	-	275	172	41	16	7	4	3	3	521	37	448	810	247	97	42	19	9	9	1,679
Illinois	-	665	444	119	16	-	-	-	-	1,243	-	351	1,126	411	249	107	52	12	4	2,311
Indiana	141	377	141	40	27	18	11	6	7	627	38	640	581	193	98	46	22	12	16	1,609
Iowa	7	246	233	81	28	9	4	2	2	605	26	852	1,071	585	365	234	122	86	78	3,393
Kansas	-	427	161	32	12	4	2	1	1	639	8	1,683	1,026	179	71	33	14	8	9	3,023
Kentucky	1	444	116	31	16	9	3	1	1	622	176	762	553	125	56	26	10	6	6	1,544
Louisiana	6	194	127	85	69	32	13	4	3	527	2	164	479	194	115	75	47	27	32	1,133
Maine	-	203	70	20	4	2	0	0	0	299	-	142	387	109	64	48	18	14	14	795
Maryland	0	49	74	11	4	1	1	1	0	142	1	151	147	30	14	9	5	2	4	362
Massachusetts	-	19	32	7	2	1	0	0	1	64	-	16	42	28	18	8	4	3	3	121
Michigan	5	214	220	60	31	17	11	5	3	561	1	1,109	904	236	108	62	29	14	22	2,484
Minnesota	-	191	274	65	30	16	10	5	3	594	11	1,172	1,105	519	294	175	92	50	49	3,456
Mississippi	2	338	137	31	20	13	7	4	4	552	-	502	760	250	143	82	35	19	22	1,813
Missouri	-	470	291	48	17	9	4	2	0	842	1	1,035	1,319	362	142	69	34	17	10	2,989
Montana	-	411	552	87	24	12	5	2	2	1,094	-	690	1,339	386	165	80	50	28	36	2,773
Nebraska	8	266	99	26	11	3	1	1	1	407	260	1,125	786	261	139	84	41	23	26	2,485
Nevada	0	388	30	11	8	7	2	1	0	448	14	846	494	95	22	13	14	16	24	1,525
New Hampshire	-	120	20	2	0	0	-	-	-	142	0	168	129	33	17	12	10	7	11	388
New Jersey	-	22	18	3	1	1	1	0	0	45	0	38	56	29	25	17	10	7	11	193
New Mexico	1	562	200	46	22	8	4	2	1	845	33	785	595	170	93	52	20	13	11	1,739
New York	20	273	349	77	35	17	12	9	11	783	15	259	1,062	437	221	124	63	34	37	2,237
North Carolina	10	310	162	36	19	10	2	1	1	541	57	476	1,059	303	138	57	23	15	23	2,094
North Dakota	-	237	231	33	7	3	0	0	0	511	3	1,092	1,137	403	166	84	32	20	25	2,961
Ohio	1	324	221	52	23	12	5	3	2	642	4	538	807	269	110	53	22	11	12	1,823
Oklahoma	-	285	240	57	28	18	9	6	3	646	7	445	934	382	205	128	64	38	43	2,238
Oregon	0	247	176	50	13	5	2	1	1	495	0	596	1,324	418	167	73	36	21	24	2,658
Pennsylvania	0	431	488	110	41	25	8	4	4	1,112	2	440	860	297	141	87	45	27	35	1,933
Rhode Island	-	14	3	0	0	-	0	0	0	18	-	4	14	16	19	19	13	9	14	108
South Carolina	-	116	281	85	58	3	2	0	1	546	-	44	701	388	305	78	36	24	15	1,591
South Dakota	-	231	290	43	17	7	3	0	0	591	-	378	1,205	629	325	173	87	51	43	2,892
Tennessee	10	490	54	10	5	3	1	0	0	564	9	779	632	147	66	36	15	7	6	1,686
Texas	-	724	945	210	67	30	11	7	6	2,001	14	1,677	3,338	1,399	664	299	124	62	55	7,617
Utah	1	388	239	41	10	4	1	1	0	683	466	185	574	276	171	110	51	29	30	1,426
Vermont	0	204	46	5	2	1	0	0	-	258	1	57	143	50	27	12	7	6	7	308
Virginia	0	161	234	49	18	5	2	0	0	469	14	167	735	282	109	44	18	9	4	1,368
Washington	-	174	140	50	27	16	9	7	6	429	-	350	914	355	148	72	36	23	28	1,926
West Virginia	11	118	143	19	9	5	3	1	1	298	4	92	406	218	128	67	35	22	30	999
Wisconsin	0	194	169	60	36	26	18	6	4	512	-	721	1,033	571	369	183	104	69	108	3,158
Wyoming	-	362	306	71	39	17	6	4	3	808	29	445	922	337	147	63	23	12	9	1,957
U.S. Total	333	13,800	10,107	2,540	1,141	540	263	134	132	28,657	1,633	26,535	39,388	14,139	7,141	3,713	1,805	1,059	1,261	95,041
Puerto Rico (3)	-	-	1	10	4	11	5	4	7	42	-	-	1	3	13	2	-	-	-	19
Grand Total	333	13,800	10,109	2,550	1,145	551	268	138	139	28,699	1,633	26,535	39,389	14,142	7,154	3,715	1,805	1,059	1,261	95,060

For footnotes, see Footnotes Page.

**NATIONAL HIGHWAY SYSTEM LENGTH - 2015**  
**MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL**

TABLE HM-47  
SHEET 2 OF 4

DECEMBER 2016

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	5	1,264	960	183	89	41	20	11	11	2,578
Alaska	263	290	537	244	191	148	99	73	148	1,730
Arizona	33	916	737	227	116	54	22	11	10	2,091
Arkansas	2	455	996	421	237	138	65	36	35	2,383
California	-	1,567	1,887	660	320	182	73	51	96	4,835
Colorado	-	657	1,331	629	307	151	78	36	35	3,225
Connecticut	-	22	50	32	26	20	12	6	10	178
Delaware	2	47	85	17	3	1	1	0	0	154
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-
Florida	186	1,385	1,472	286	88	31	7	4	3	3,275
Georgia	20	1,146	1,786	442	156	63	25	12	17	3,648
Hawaii	-	1	19	14	13	15	8	6	5	80
Idaho	37	723	982	288	113	48	22	12	12	2,201
Illinois	-	1,016	1,569	530	265	107	52	12	4	3,555
Indiana	178	1,017	723	234	125	64	33	18	23	2,237
Iowa	33	1,097	1,304	666	394	243	126	87	80	3,998
Kansas	8	2,110	1,187	211	83	38	15	9	10	3,663
Kentucky	177	1,206	670	156	72	35	13	7	7	2,166
Louisiana	8	359	607	279	184	107	59	31	35	1,660
Maine	-	345	457	129	68	50	18	14	14	1,095
Maryland	1	200	221	41	18	11	7	2	5	504
Massachusetts	-	35	74	35	20	9	5	3	5	185
Michigan	5	1,322	1,124	296	139	78	40	19	25	3,044
Minnesota	11	1,363	1,379	584	324	191	102	55	52	4,050
Mississippi	2	840	896	281	163	96	42	22	25	2,365
Missouri	1	1,505	1,611	410	160	78	38	19	10	3,830
Montana	-	1,101	1,891	472	190	92	54	29	38	3,867
Nebraska	268	1,391	885	287	150	87	42	24	27	2,892
Nevada	14	1,234	524	107	30	20	17	16	24	1,973
New Hampshire	0	288	149	36	17	12	10	7	11	530
New Jersey	0	60	74	32	26	18	11	7	11	238
New Mexico	34	1,347	795	216	115	61	24	14	12	2,585
New York	36	532	1,411	514	256	141	75	42	48	3,020
North Carolina	67	787	1,221	338	158	68	25	16	23	2,635
North Dakota	3	1,329	1,367	437	173	87	33	20	26	3,472
Ohio	5	862	1,029	321	133	65	27	14	14	2,465
Oklahoma	7	730	1,174	439	234	145	74	43	46	2,885
Oregon	0	842	1,501	468	179	77	38	23	25	3,153
Pennsylvania	2	872	1,348	407	183	112	53	32	39	3,044
Rhode Island	-	18	17	16	19	19	13	9	14	126
South Carolina	-	160	982	474	363	82	37	24	16	2,137
South Dakota	-	609	1,495	672	342	180	90	52	43	3,483
Tennessee	18	1,269	686	158	71	38	16	7	6	2,250
Texas	14	2,401	4,283	1,610	732	329	135	68	61	9,618
Utah	467	573	813	317	181	114	51	30	30	2,109
Vermont	1	261	189	54	29	13	7	6	7	566
Virginia	14	328	969	331	127	49	20	9	5	1,837
Washington	-	523	1,054	405	175	88	45	30	35	2,355
West Virginia	14	210	549	238	137	71	38	23	31	1,297
Wisconsin	0	914	1,201	632	405	209	122	75	112	3,670
Wyoming	29	807	1,228	408	187	79	30	15	12	2,765
U.S. Total	1,966	40,335	49,495	16,679	8,282	4,253	2,068	1,193	1,393	123,699
Puerto Rico (3)	-	-	3	13	17	13	5	4	7	61
Grand Total	1,966	40,335	49,498	16,692	8,298	4,266	2,073	1,197	1,400	123,759

For footnotes, see Footnotes Page.

**NATIONAL HIGHWAY SYSTEM LENGTH - 2015**  
**MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN**

TABLE HM-47  
SHEET 3 OF 4

DECEMBER 2016

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	2	218	109	32	25	16	11	8	8	427	131	411	431	125	65	41	25	15	24	1,138
Alaska	-	17	40	11	5	3	2	1	1	79	-	15	48	26	19	14	10	8	16	156
Arizona	0	148	71	21	8	3	1	1	0	252	144	154	224	107	68	41	24	14	36	669
Arkansas	0	90	101	39	22	18	11	6	6	293	41	57	215	121	86	57	40	25	54	656
California	0	349	448	150	110	76	48	26	34	1,241	-	510	1,073	879	891	868	741	677	2,405	8,044
Colorado	-	67	121	60	32	12	5	3	4	304	1	78	321	225	219	183	112	86	154	1,379
Connecticut	-	130	104	40	21	11	5	4	3	317	-	55	173	136	125	103	74	60	221	946
Delaware	5	3	21	7	2	1	0	0	0	36	5	35	100	36	20	11	6	5	10	222
Dist. of Columbia	-	-	-	-	5	2	0	1	4	12	-	-	-	2	3	6	3	5	103	122
Florida	98	314	273	51	24	10	5	1	1	680	205	1,034	1,873	653	345	178	95	59	90	4,326
Georgia	2	357	216	66	34	17	9	6	5	710	345	620	1,031	334	181	97	56	37	96	2,451
Hawaii	-	1	12	9	10	9	5	4	4	55	-	20	52	50	46	48	29	22	47	314
Idaho	-	36	34	11	5	3	1	1	1	90	26	66	120	57	31	28	22	15	32	371
Illinois	-	256	469	113	79	17	6	1	2	942	-	201	767	685	590	366	240	192	317	3,359
Indiana	94	148	105	64	36	21	14	8	10	404	633	309	417	196	133	91	58	40	67	1,312
Iowa	4	50	75	23	11	7	3	2	1	172	73	69	185	168	130	94	57	48	102	854
Kansas	3	101	69	29	16	9	5	2	1	232	13	148	170	62	49	32	19	17	20	517
Kentucky	-	114	65	18	12	6	3	2	2	220	117	163	188	84	59	42	20	17	27	600
Louisiana	1	105	90	54	49	51	23	17	15	403	106	99	227	153	128	117	88	74	168	1,055
Maine	-	33	19	6	3	2	1	1	1	66	-	11	56	24	23	15	10	7	21	166
Maryland	1	115	131	32	19	13	8	7	10	335	14	233	441	197	149	110	79	58	215	1,481
Massachusetts	2	300	140	21	11	8	5	6	15	508	54	139	302	293	285	278	212	180	466	2,155
Michigan	3	182	264	90	52	41	25	17	13	683	32	211	617	427	340	279	212	174	442	2,702
Minnesota	9	71	130	52	24	15	10	4	6	312	19	202	335	149	85	56	30	26	64	947
Mississippi	-	131	63	22	16	11	5	3	2	253	7	132	285	163	112	82	57	40	136	1,007
Missouri	0	256	179	46	25	16	8	4	3	538	30	269	505	201	130	91	54	36	63	1,350
Montana	-	39	44	7	3	2	1	0	1	98	6	25	61	40	25	18	13	9	20	211
Nebraska	6	20	25	8	4	2	1	1	-	61	136	32	71	46	40	39	30	28	70	356
Nevada	0	79	31	18	12	6	2	1	0	150	5	151	122	57	36	19	10	8	13	416
New Hampshire	-	64	14	3	1	1	0	0	-	83	1	101	87	40	25	16	12	9	27	317
New Jersey	1	128	138	42	23	16	10	11	17	386	3	215	480	296	261	238	177	156	520	2,343
New Mexico	0	102	27	10	8	4	1	1	1	153	27	85	140	84	76	60	39	29	65	578
New York	22	209	378	116	68	46	33	22	48	919	41	133	881	623	477	385	281	238	942	3,960
North Carolina	34	267	273	82	37	15	6	3	2	686	98	240	882	469	289	168	90	57	151	2,344
North Dakota	-	17	30	8	3	2	0	-	0	60	-	18	46	34	29	21	12	8	19	186
Ohio	0	349	355	96	61	36	16	9	9	931	12	370	871	498	384	302	206	157	404	3,192
Oklahoma	0	71	119	39	21	15	9	5	8	286	20	99	238	152	123	115	85	76	125	1,013
Oregon	-	81	106	22	9	7	5	3	2	234	3	122	273	160	102	74	51	39	97	918
Pennsylvania	7	211	321	88	58	33	16	12	10	748	11	228	809	588	488	392	256	204	439	3,405
Rhode Island	-	19	23	5	2	1	1	1	1	52	1	10	51	45	59	58	45	43	111	423
South Carolina	-	48	128	65	37	19	5	2	0	304	-	36	316	340	243	132	43	27	23	1,161
South Dakota	-	11	50	14	7	4	1	0	0	88	0	7	37	25	19	15	15	10	24	152
Tennessee	4	371	96	29	15	7	4	2	3	526	45	587	633	249	142	100	59	47	87	1,904
Texas	1	315	568	235	142	82	38	21	14	1,415	91	626	1,969	1,216	853	651	405	307	813	6,841
Utah	0	89	96	37	16	10	4	1	0	253	150	114	239	114	64	42	20	13	14	620
Vermont	2	35	19	4	1	1	0	-	0	60	5	13	40	22	15	11	6	5	12	125
Virginia	15	152	289	104	48	26	12	6	3	638	54	166	670	421	289	207	128	88	128	2,096
Washington	-	113	122	46	20	12	7	7	7	335	1	160	431	299	213	176	118	106	364	1,866
West Virginia	3	101	91	21	14	8	3	1	2	241	7	26	156	85	54	35	24	16	22	419
Wisconsin	-	105	96	78	37	23	14	6	5	363	3	97	312	303	295	252	156	129	376	1,920
Wyoming	-	26	45	18	7	4	2	1	2	106	11	24	70	41	28	17	11	10	22	221
U.S. Total	321	6,615	6,834	2,259	1,310	776	411	249	285	18,740	2,724	8,927	20,041	11,808	8,945	6,870	4,665	3,757	10,283	75,288
Puerto Rico (3)	2	-	30	74	47	44	28	8	6	238	2	-	2	7	11	33	21	11	25	109
Grand Total	323	6,615	6,864	2,333	1,358	821	439	257	291	18,978	2,726	8,927	20,043	11,808	8,955	6,903	4,686	3,769	10,308	75,397

For footnotes, see Footnotes Page.

# NATIONAL HIGHWAY SYSTEM LENGTH - 2015

## MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-47  
SHEET 4 OF 4

DECEMBER 2016

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	133	630	540	157	89	57	36	23	33	1,565
Alaska	-	32	89	37	24	17	12	8	17	235
Arizona	145	302	295	128	76	43	25	15	36	921
Arkansas	41	147	316	160	108	75	51	32	60	949
California	0	859	1,521	1,028	1,002	944	789	704	2,438	9,285
Colorado	1	145	442	285	251	196	117	89	158	1,683
Connecticut	-	185	277	176	146	115	78	63	224	1,264
Delaware	11	38	122	43	22	12	6	5	10	258
Dist. of Columbia	-	-	-	2	8	8	3	6	108	134
Florida	303	1,348	2,146	704	370	188	99	60	91	5,006
Georgia	347	977	1,246	400	215	113	65	43	101	3,161
Hawaii	-	21	64	59	56	57	34	27	51	369
Idaho	26	101	154	68	36	31	23	15	33	461
Illinois	-	457	1,236	797	669	383	246	193	319	4,300
Indiana	726	457	523	259	169	112	72	48	76	1,716
Iowa	77	119	260	192	142	101	60	49	104	1,025
Kansas	16	250	239	90	65	41	23	19	21	749
Kentucky	117	277	252	102	71	47	24	18	28	820
Louisiana	108	204	317	207	177	168	112	91	183	1,458
Maine	-	44	75	30	27	16	11	7	22	232
Maryland	15	348	572	229	168	123	87	65	225	1,817
Massachusetts	56	439	442	314	296	287	217	186	481	2,663
Michigan	35	393	882	517	392	319	237	191	455	3,385
Minnesota	27	273	465	201	108	71	40	30	70	1,259
Mississippi	7	263	348	184	127	93	63	43	138	1,260
Missouri	30	525	685	247	155	107	63	40	66	1,888
Montana	6	64	105	47	28	20	14	10	21	309
Nebraska	142	52	96	54	44	41	31	29	70	416
Nevada	5	231	153	75	48	26	12	8	13	566
New Hampshire	1	165	101	44	26	16	12	10	27	401
New Jersey	4	343	618	338	284	254	187	166	537	2,729
New Mexico	27	187	168	93	84	64	40	30	66	731
New York	63	342	1,259	738	545	431	314	260	990	4,879
North Carolina	132	508	1,154	551	326	183	96	60	153	3,030
North Dakota	-	35	76	41	31	23	12	8	19	246
Ohio	12	719	1,226	594	446	338	222	166	413	4,123
Oklahoma	20	170	356	191	144	129	94	81	132	1,299
Oregon	3	203	379	182	111	81	56	42	99	1,152
Pennsylvania	19	439	1,131	676	546	425	272	216	449	4,153
Rhode Island	1	29	74	50	62	59	46	44	112	475
South Carolina	-	85	445	405	281	151	48	29	23	1,465
South Dakota	0	17	87	39	26	19	17	11	24	240
Tennessee	49	957	729	277	157	107	63	49	90	2,430
Texas	92	940	2,537	1,451	995	734	443	328	827	8,256
Utah	150	203	335	151	80	52	24	15	14	873
Vermont	6	48	60	25	16	12	6	5	12	185
Virginia	69	318	958	524	336	233	140	94	131	2,734
Washington	1	273	553	345	234	188	125	113	371	2,201
West Virginia	10	128	247	106	68	43	27	18	24	661
Wisconsin	3	202	408	381	332	274	170	134	381	2,283
Wyoming	11	50	114	59	35	20	13	11	24	327
U.S. Total	3,045	15,542	26,875	14,059	10,255	7,647	5,076	4,006	10,568	94,028
Puerto Rico (3)	4	-	32	82	58	77	49	19	31	347
Grand Total	3,048	15,542	26,907	14,141	10,313	7,723	5,125	4,025	10,599	94,375

For footnotes, see Footnotes Page.

# **NATIONAL HIGHWAY SYSTEM LENGTH - 2015**

## **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.
- (3) 2009 data.