Table 3.3.3

CHARACTERISTICS OF MULTILAYER ALUMINUM-CONDUCTOR-STEEL-REINFORCED (ACSR)

Code	Cross Section (kcmil) Al	Cross Section (sq mm) Al	Cross Section (sq mm) Tot	Stranding Aluminum	Stranding Steel	Diameter Cond (in.)	Diameter Core (in.)	Layers	wt (lbs per 1000 ft)	STRG (Kips)	DC 25 C	Resistance (Ohms/Mile) AC at 60 HZ 25 C	50 C	75 C	100 C	GMR (ft)	Reactance 1 ft Rad. 60 HZ X_a (Ohm/Mile)	Reactance 1 ft Rad. 60 HZ X'_a (Megohm-Mile)
—	2776.	1407.	1521.	84x.1818	19x.1091	2.000	.546	4	3219	81.6	.0338	.0395	.0421	.0452	.0482	.0667	.329	.0736
Joree	2515.	1274.	1344.	76x.1819	19x.0849	1.880	.425	4	2749	61.7	.0365	.0418	.0450	.0482	.0516	.0621	.337	.0755
Thrasher	2312.	1171.	1235.	76x.1744	19x.0814	1.802	.407	4	2526	57.3	.0397	.0446	.0482	.0518	.0554	.0595	.342	.0767
Kiwi	2167.	1098.	1146.	72x.1735	7x.1157	1.735	.347	4	2303	49.8	.0424	.0473	.0511	.0550	.0589	.0570	.348	.0778
Bluebird	2156.	1092.	1181.	84x.1602	19x.0961	1.762	.480	4	2511	60.3	.0426	.0466	.0505	.0544	.0584	.0588	.344	.0774
Chukar	1781.	902.	976.	84x.1456	19x.0874	1.602	.437	4	2074	51.0	.0516	.0549	.0598	.0646	.0695	.0534	.355	.0802
Falcon	1590.	806.	908.	54x.1716	19x.1030	1.545	.515	3	2044	54.5	.0578	.0602	.0657	.0712	.0767	.0521	.358	.0813
Lapwing	1590.	806.	862.	45x.1880	7x.1253	1.504	.376	3	1792	42.2	.0590	.0622	.0678	.0734	.0790	.0497	.364	.0821
Parrot	1510.	765.	862.	54x.1672	19x.1003	1.505	.502	3	1942	51.7	.0608	.0631	.0689	.0748	.0806	.0508	.362	.0821
Nuthatch	1510.	765.	818.	45x.1832	7x.1221	1.465	.366	3	1702	40.1	.0622	.0652	.0711	.0770	.0830	.0485	.367	.0828
Plover	1431.	725.	817.	54x.1628	19x.0977	1.465	.489	3	1840	49.1	.0642	.0663	.0725	.0787	.0849	.0494	.365	.0828
Bobolink	1431.	725.	775.	45x.1783	7x.1189	1.427	.357	3	1613	38.3	.0656	.0685	.0747	.0810	.0873	.0472	.371	.0836
Martin	1351.	685.	772.	54x.1582	19x.0949	1.424	.475	3	1737	46.3	.0680	.0700	.0765	.0831	.0897	.0480	.368	.0837
Dipper	1351.	685.	732.	45x.1733	7x.1155	1.386	.347	3	1522	36.2	.0695	.0722	.0788	.0855	.0922	.0459	.374	.0845
Pheasant	1272.	645.	726.	54x.1535	19x.0921	1.382	.461	3	1635	43.6	.0722	.0741	.0811	.0881	.0951	.0466	.372	.0846
Bittern	1272.	644.	689.	45x.1681	7x.1121	1.345	.336	3	1434	34.1	.0738	.0764	.0835	.0906	.0977	.0445	.378	.0854
Grackle	1192.	604.	681.	54x.1486	19x.0892	1.338	.446	3	1533	41.9	.0770	.0788	.0863	.0938	.1013	.0451	.376	.0855
Bunting	1193.	604.	646.	45x.1628	7x.1085	1.302	.326	3	1344	32.0	.0787	.0811	.0887	.0963	.1039	.0431	.382	.0863
Finch	1114.	564.	636.	54x.1436	19x.0862	1.293	.431	3	1431	39.1	.0825	.0842	.0922	.1002	.1082	.0436	.380	.0866
Bluejay	1113.	564.	603.	45x.1573	7x.1049	1.258	.315	3	1255	29.8	.0843	.0866	.0947	.1029	.1111	.0416	.386	.0873
Curlew	1033.	523.	591.	54x.1383	7x.1383	1.245	.415	3	1331	36.6	.0909	.0924	.1013	.1101	.1190	.0420	.385	.0877
Ortolan	1033.	523.	560.	45x.1515	7x.1010	1.212	.303	3	1165	27.7	.0909	.0930	.1018	.1106	.1195	.0401	.390	.0885
Merganser	954.	483.	596.	30x.1785	7x.1783	1.248	.535	2	1493	46.0	.0987	.0995	.1092	.1189	.1286	.0430	.382	.0876
Cardinal	954.	483.	546.	54x.1329	7x.1329	1.196	.399	3	1229	33.8	.0984	.0998	.1094	.1191	.1287	.0404	.389	.0889
Rail	954.	483.	517.	45x.1456	7x.0971	1.165	.291	3	1075	25.9	.0984	.1004	.1099	.1195	.1291	.0385	.395	.0896
Baldpate	900.	456.	562.	30x.1732	7x.1732	1.212	.520	2	1410	43.3	.1046	.1054	.1156	.1259	.1362	.0417	.385	.0885
Canary	900.	456.	515.	54x.1291	7x.1291	1.162	.387	3	1159	31.9	.1043	.1056	.1158	.1260	.1362	.0392	.393	.0897
Ruddy	900.	456.	487.	45x.1414	7x.0943	1.131	.283	3	1015	25.4	.1043	.1062	.1163	.1265	.1367	.0374	.399	.0905
Crane	875.	443.	501.	54x.1273	7x.1273	1.146	.382	3	1126	31.4	.1073	.1086	.1191	.1296	.1401	.0387	.395	.0901
Willet	874.	443.	474.	45x.1394	7x.0929	1.115	.279	3	987	25.0	.1073	.1092	.1196	.1301	.1406	.0369	.400	.0909
Skimmer	795.	403.	497.	30x.1628	7x.1628	1.140	.488	2	1246	38.3	.1183	.1191	.1307	.1423	.1540	.0392	.393	.0903
Mallard	795.	403.	495.	30x.1628	19x.0977	1.140	.489	2	1235	38.4	.1183	.1191	.1307	.1423	.1540	.0392	.393	.0903
Drake	795.	403.	469.	26x.1749	7x.1360	1.108	.408	2	1094	31.5	.1180	.1190	.1306	.1422	.1538	.0375	.399	.0911
Condor	795.	403.	455.	54x.1213	7x.1213	1.092	.364	3	1024	28.2	.1181	.1193	.1309	.1425	.1541	.0368	.401	.0916
Cuckoo	795.	403.	455.	24x.1820	7x.1213	1.092	.364	2	1024	27.9	.1181	.1193	.1308	.1424	.1540	.0366	.402	.0916
Tern	795.	403.	431.	45x.1329	7x.0886	1.063	.266	3	896	22.1	.1181	.1197	.1313	.1428	.1544	.0352	.406	.0923
Coot	795.	403.	414.	36x.1486	1x.1486	1.040	.149	3	805	16.5	.1175	.1197	.1311	.1426	.1540	.0337	.411	.0930
Buteo	715.	362.	447.	30x.1544	7x.1544	1.081	.463	2	1119	34.4	.1316	.1322	.1452	.1581	.1711	.0372	.399	.0919
Redwing	715.	362.	445.	30x.1544	19x.0926	1.081	.463	2	1111	34.6	.1316	.1322	.1452	.1581	.1711	.0372	.399	.0919
Starling	716.	363.	422.	26x.1659	7x.1290	1.051	.387	2	985	28.4	.1312	.1321	.1450	.1579	.1707	.0355	.405	.0927
Crow	715.	362.	409.	54x.1151	7x.1151	1.036	.345	3	921	26.3	.1312	.1323	.1452	.1580	.1709	.0350	.407	.0931
Stilt	716.	363.	410.	24x.1727	7x.1151	1.036	.345	2	922	25.5	.1311	.1322	.1451	.1579	.1708	.0347	.408	.0931
Grebe	716.	363.	388.	45x.1261	7x.0841	1.009	.252	3	807	20.6	.1312	.1327	.1455	.1583	.1712	.0334	.413	.0939
Gannet	666.	338.	393.	26x.1601	7x.1245	1.014	.374	2	917	26.6	.1409	.1417	.1555	.1694	.1832	.0343	.409	.0937
Gull	667.	338.	382.	54x.1111	7x.1111	1.000	.333	3	858	24.5	.1408	.1418	.1557	.1695	.1833	.0337	.411	.0942
Flamingo	667.	338.	382.	24x.1667	7x.1111	1.000	.333	2	859	23.7	.1407	.1418	.1556	.1694	.1832	.0335	.412	.0942
Scoter	636.	322.	397.	30x.1456	7x.1456	1.019	.437	2	993	30.8	.1480	.1486	.1631	.1777	.1923	.0351	.406	.0936
Egret	636.	322.	396.	30x.1456	19x.0874	1.019	.437	2	988	31.5	.1480	.1485	.1631	.1777	.1923	.0351	.406	.0936
Grosbeak	636.	322.	375.	26x.1564	7x.1216	0.990	.365	2	875	25.2	.1476	.1484	.1629	.1774	.1920	.0335	.412	.0944
Goose	636.	322.	364.	54x.1085	7x.1085	0.977	.326	3	819	23.6	.1477	.1486	.1631	.1776	.1922	.0330	.414	.0949
Rook	636.	322.	364.	24x.1628	7x.1085	0.977	.326	2	819	22.0	.1476	.1485	.1630	.1775	.1920	.0327	.415	.0949
Kingbird	636.	322.	340.	18x.1880	1x.1880	0.940	.188	2	691	15.7	.1468	.1484	.1627	.1771	.1915	.0304	.424	.0960
Swift	636.	322.	331.	36x.1329	1x.1329	0.930	.133	3	644	13.4	.1469	.1487	.1630	.1774	.1918	.0302	.425	.0963

Table 3.3.3 (Cont.)
CHARACTERISTICS OF MULTILAYER ALUMINUM-CONDUCTOR-STEEL-REINFORCED

Code	Cross Section (kcmil) Al	Cross Section (sq mm) Al	Cross Section (sq mm) Tot	Stranding Aluminum	Stranding Steel	Diameter Cond (in.)	Diameter Core (in.)	Layers	wt (lbs per 1000 ft)	STRG (Kips)	DC 25 C	Resistance (Ohms/Mile) AC at 60 HZ 25 C	50 C	75 C	100 C	GMR (ft)	Reactance 1 ft Rad. 60 HZ X_a (Ohm/Mile)	Reactance 1 ft Rad. 60 HZ X'_a (Megohm-Mile)
Wood Duck	605.	307.	378.	30x.1420	7x.1420	0.994	.426	2	947	29.4	.1556	.1561	.1714	.1868	.2021	.0342	.410	.0943
Teal	605.	307.	376.	30x.1420	19x.0852	0.994	.426	2	940	30.0	.1556	.1561	.1714	.1868	.2021	.0342	.410	.0943
Squab	605.	306.	356.	26x.1525	7x.1186	0.966	.356	2	833	23.6	.1552	.1560	.1713	.1866	.2018	.0327	.415	.0952
Peacock	605.	307.	346.	24x.1588	7x.1059	0.953	.318	2	780	21.6	.1551	.1560	.1712	.1865	.2018	.0319	.418	.0956
Duck	606.	307.	347.	54x.1059	7x.1059	0.953	.318	3	779	22.5	.1550	.1559	.1711	.1864	.2016	.0322	.417	.0956
Eagle	557.	282.	348.	30x.1362	7x.1362	0.953	.409	2	872	27.2	.1691	.1696	.1863	.2029	.2196	.0328	.415	.0956
Dove	556.	282.	328.	26x.1463	7x.1138	0.927	.341	2	766	22.4	.1687	.1694	.1860	.2026	.2192	.0313	.420	.0964
Parakeet	557.	282.	319.	24x.1523	7x.1015	0.914	.305	2	717	19.8	.1686	.1695	.1860	.2026	.2192	.0306	.423	.0968
Osprey	556.	282.	298.	18x.1758	1x.1758	0.879	.176	2	604	13.7	.1679	.1693	.1857	.2022	.2187	.0284	.432	.0980
Hen	477.	242.	298.	30x.1261	7x.1261	0.883	.378	2	747	23.8	.1973	.1977	.2171	.2366	.2560	.0304	.424	.0979
Hawk	477.	242.	281.	26x.1354	7x.1053	0.858	.316	2	657	19.5	.1969	.1975	.2169	.2363	.2557	.0290	.430	.0987
Flicker	477.	242.	273.	24x.1410	7x.0940	0.846	.282	2	615	17.2	.1967	.1975	.2168	.2362	.2556	.0283	.432	.0991
Pelican	477.	242.	255.	18x.1628	1x.1628	0.814	.163	2	518	11.8	.1958	.1970	.2162	.2355	.2547	.0263	.441	.1003
Lark	397.	201.	248.	30x.1151	7x.1151	0.806	.345	2	623	20.3	.2368	.2371	.2605	.2838	.3072	.0277	.435	.1006
Ibis	397.	201.	234.	26x.1236	7x.0961	0.783	.288	2	547	16.3	.2363	.2368	.2601	.2834	.3067	.0265	.441	.1014
Brant	398.	201.	228.	24x.1287	7x.0858	0.772	.257	2	512	14.7	.2361	.2367	.2600	.2833	.3066	.0259	.444	.1018
Chickadee	397.	201.	213.	18x.1486	1x.1486	0.743	.149	2	432	9.9	.2350	.2360	.2591	.2822	.3054	.0240	.452	.1030
Oriole	336.	170.	210.	30x.1059	7x.1059	0.741	.318	2	527	17.0	.2797	.2800	.3076	.3352	.3628	.0255	.445	.1030
Linnet	336.	170.	198.	26x.1137	7x.0884	0.720	.265	2	463	14.0	.2793	.2797	.3072	.3348	.3623	.0243	.451	.1039
Widgeon	336.	170.	193.	24x.1184	7x.0789	0.710	.237	2	433	12.5	.2790	.2795	.3070	.3345	.3621	.0238	.454	.1043
Merlin	336.	170.	180.	18x.1367	1x.1367	0.684	.137	2	366	8.6	.2777	.2785	.3059	.3332	.3606	.0221	.463	.1054
Piper	300.	152.	187.	30x.1000	7x.1000	0.700	.300	2	470	15.5	.3137	.3139	.3449	.3758	.4068	.0241	.452	.1047
Ostrich	300.	152.	177.	26x.1074	7x.0835	0.680	.251	2	413	12.7	.3130	.3134	.3443	.3751	.4060	.0230	.458	.1056
Gadwall	300.	152.	172.	24x.1118	7x.0745	0.671	.224	2	386	11.2	.3129	.3134	.3442	.3751	.4060	.0225	.461	.1060
Phoebe	300.	152.	160.	18x.1281	1x.1291	0.646	.129	2	326	7.7	.3114	.3121	.3428	.3735	.4042	.0209	.469	.1071
Junco	267.	135.	167.	30x.0943	7x.0943	0.660	.283	2	418	13.7	.3527	.3530	.3878	.4226	.4574	.0227	.459	.1065
Partridge	267.	135.	157.	26x.1013	7x.0788	0.642	.236	2	367	11.3	.3518	.3522	.3869	.4216	.4563	.0217	.465	.1073
Waxwing	267.	135.	143.	18x.1217	1x.1217	0.609	.122	2	289	6.9	.3504	.3510	.3856	.4201	.4547	.0197	.477	.1089