

06/30/2025

**City of Grand Rapids
Small and Micro Cell Wireless Facilities Sites
Radio Frequency (RF) Power Density Measurements for the Year 2025
with Retest of 2022 Sites**

Executive Summary:

Geotech, Inc. performed broadband power density measurements of existing small and micro cell sites to determine compliance or non-compliance with the existing requirements for the general public as set by the Federal Communications Commission (FCC) and other international agencies. As of June 20, 2025, ninety-eight (98) sites were tested, and the measurements of the maximum power density were less than nine (9) percent of the Maximum Permissible Exposure (MPE) limit as set by the FCC. All the ninety-eight (98) active sites tested in 2025 were retested sites of 2022.

Objective:

Perform small and micro cell radio frequency testing to determine compliance or non-compliance of the Maximum Permissible Exposure (MPE) power densities with the applicable requirements as set by the Federal Communications Commission (FCC) and other international agencies.

Testing shall be performed for existing installations and repeated every three (3) years. New installation shall be tested on a yearly basis and repeated every three (3) years.

Background Information:

1. Number of cell sites: As of this date, there are 226 existing sites.
2. All the ninety-seven (98) active sites tested in 2025 were retested sites of 2022 and previous years.
3. Several types of radio/antenna/pole installations have been installed and/or are proposed. The known radio frequencies of the small/micro cells range from 800 megahertz (MHz) to 6 gigahertz (GHz).
4. The following service providers have, or propose to have small/micro cells within the City limits: Verizon & AT&T (These sites are operated by ACD, Mobilitie, and Zayo).
5. The Federal Communications Commission (FCC) regulates and allocates the radio frequencies. The Institute of Electrical and Electronic Engineers (IEEE) has developed Standard 95.1; which was adopted by the FCC. Similar standards were developed by other agencies; which included the International Commission on Non-Ionizing Radiation

Protection (ICNIRP) and Canada Code 6. These standards define the limits for Maximum Permissible Exposure (MPE) Power Densities (in Watts/Meter Squared) as follows:

	<u>FCC</u> <u>(1.5-100GHz)</u>	<u>INCIRP</u> <u>(2-300GHz)</u>	<u>Canada</u> <u>(6-150GHz)</u>
Occupational	50	50	50
Non-Occupational (General Public)	10	10	10

6. Because the atmosphere is flooded with nearly unlimited radio transmissions from various sources, it may in some cases be difficult to distinguish between existing radiation levels and new small/micro cell radiation levels. Based on these factors, it was decided to perform broadband power density measurements to account for the frequencies ranging from 300KHz to 50GHz; which includes the operating frequencies for the small/micro cells. These measurements identify the existing power densities, and determine compliance or non-compliance with the FCC standards.
7. Ground level Safety: Radio frequency emissions from antennae used for cellular transmissions result in exposure levels on the ground that are typically below the safety limits which were adopted by the FCC based on the recommendations of expert organizations, and endorsed by agencies of the Federal Government responsible for health and safety.

Testing Procedures and Parameters:

1. Test Instrument: Narda NBM-550-S with FCC probe #EA5091.
2. Measurements were made at Six (6) feet above ground at distances of 10 feet, 50 feet and 100 feet away from the pole/cell base.
3. Measurements were broadband base and account for radio frequencies ranging from 300KHz to 50GHz.
4. Measurements recorded the maximum readings as a percentage of the Maximum Permissible Exposure (MPE) power densities for occupational permissible limit. These measurements were converted to non-occupational (general public) power densities, and were compared with its MPE limit. Note: the MPE for non-occupational (general public) permissible limit is lower by a factor of 5 in comparison with the occupational permissible limit.

Testing Results: Refer to:

1. Attachment #1- Radio Frequency (RF) Power Density Testing - Occupational and Non-Occupational (2025 Modifications and Retests)
3. Attachment #2- Summary of Radio Frequency (RF) Power Density Testing - Non-Occupational (2022 Tests Compared to 2025 Retests)

Conclusion:



616-949-3340
info@geotech-inc.com

The general public exposure, to radio frequency power densities as measured at six (6) feet above ground of the above tested sites, is less than nine (9) percent of the Maximum Permissible Exposure set by the FCC.

**Attachment #1 - Summary of Radio Frequency (RF) Power Density Testing - Occupational and Non-Occupational
City of Grand Rapids / Small and Micro Cell Radio Frequency (RF) Power Density - Non-Occupational (2025 Modified Sites and Retests)**

Order	Small Cell	Pole Owner	Site ID	Site Status	Approved Date	Address	Measurements as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Occupational Limits						Measurement Conversions as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Non-Occupational Limits											
							Measurements at 6 feet above Ground			Measurements at 10 feet above Ground			Measurements at 6 feet above Ground			Measurements at 10 feet above Ground								
							Distance from Pole						Distance from Pole						Distance from Pole					
							Direction	10 ft.	50 ft.	100 ft.	Direction	10 ft.	50 ft.	100 ft.	Direction	10 ft.	50 ft.	100 ft.	Direction	10 ft.	50 ft.	100 ft.		
1	AT&T	Grand Rapids	GRRPD 009	Installation complete	8/31/2021	3193 Leonard St. NE	South	0.0828	0.4140	0.0248	North	0.0745	0.0828	0.1324	South	0.4140	2.0700	0.1240	North	0.3725	0.4140	0.6620		
2	Mobilet	Grand Rapids	D99X5943-O	Installation complete	10/10/2017	1199 Ball Ave. NE	West	0.1076	0.0579	0.0662	West	0.1318	0.1279	0.1387	East	0.5380	0.2895	0.3310	West	0.6590	0.8645	0.6935		
3	ACD	Grand Rapids	16704M	Installation complete	11/8/2019	1432 Scribner Ave. NW	North	0.6867	0.5204	0.3539	South	0.2837	0.7118	0.3058	North	3.4335	2.6020	1.7695	South	1.4185	3.5590	1.5290		
4	ACD	Grand Rapids	16701	Installation complete	1/13/2017	1503 Alpine Ave. NW	North	2.4429	0.7923	0.6249	South	0.5977	0.6282	0.2982	North	2.2145	3.9615	3.1245	South	2.9885	3.1410	4.4910		
5	ACD	Consumers	16702	Installation complete	11/3/2017	1128 Muskogean Ave. NW	South	0.2728	0.1444	0.2407	North	0.2567	0.3691	0.4814	South	1.3640	0.7220	1.2035	North	1.2835	1.8455	2.4070		
6	ACD	Grand Rapids	16703M	Installation complete	11/8/2019	890 Seward Ave. NW	North	0.2483	0.3370	0.3851	South	0.2246	0.1926	0.1926	North	1.2415	1.6850	1.9255	South	1.1230	0.2885	0.9630		
7	Mobilet	Grand Rapids	D99X51V-F	Installation complete	12/20/2016	1006 S/8 Bridge St. NW	West	0.2543	0.0890	0.0642	East	0.1123	0.0802	0.0321	West	1.2715	0.4450	0.3210	East	0.5615	0.4010	0.1605		
8	ACD	Grand Rapids	16402M	Installation complete	11/8/2019	219 Jackson Pl. NW	North	0.2547	0.1765	0.0963	East	0.1123	0.1123	0.1444	North	1.2035	0.8825	0.4815	South	0.5615	0.5615	0.7220		
9	ACD	Grand Rapids	16401M	Installation complete	11/8/2019	30 Marion Ave. NW	South	0.5653	0.3009	0.2407	North	0.1765	0.4172	0.3691	South	2.8265	1.5945	1.2035	North	0.8825	2.0860	1.8455		
10	ACD	Grand Rapids	10013	Installation complete	9/1/2017	370 Goodrich St. SW	West	1.2080	0.8490	0.7003	East	0.7564	0.6741	0.8346	West	6.0400	4.2450	3.5015	East	3.7820	3.3705	4.1730		
11	AT&T	Grand Rapids	GRRPD 030	Installation complete	1/2/2019	206 Fulton St. W	South	0.1859	0.1926	0.1565	North	0.2534	0.1926	0.2086	South	0.9920	0.9630	0.7825	North	1.2670	0.9630	1.0430		
12	ACD	Grand Rapids	10038	Installation complete	9/9/2016	105 S/8 Front Ave. NW	North	1.1250	1.1110	0.9834	South	0.4172	0.4493	0.4975	North	5.6250	5.5550	4.9170	South	2.0860	2.2465	2.4875		
13	ACD	Grand Rapids	10037M	Installation complete	11/8/2019	198 S/8 Scribner Ave. NW	North	0.0802	0.4814	0.0802	South	0.0963	0.7085	0.7539	North	0.4010	2.4070	0.4010	South	0.4815	3.5425	3.7695		
14	ACD	Grand Rapids	10030M	Installation complete	11/8/2019	243 S/8 Michigan St. NW	East	0.6994	0.7493	0.7718	West	0.5817	0.8856	0.9386	East	3.4970	3.7465	3.8590	West	2.9085	4.4280	4.6930		
15	ACD	Grand Rapids	16705M	Installation complete	11/8/2019	700 Scribner Ave. NW	North	0.7393	1.2050	1.1450	South	0.5601	0.5192	0.5238	North	3.6965	6.0250	5.7250	South	2.8005	2.9660	2.6190		
16	ACD	Grand Rapids	10027M	Installation complete	11/8/2019	81 S/8 Lyon St. NW	West	0.4654	0.3530	0.3755	East	1.1020	0.9677	0.7248	West	2.3270	1.7650	1.8125	East	5.5100	2.8885	3.6240		
17	ACD	Grand Rapids	10016M	Installation complete	6/11/2019	135 S/8 Monroe Center St. NW	South	0.0963	0.1605	0.3624	North	0.9761	0.9190	0.6552	South	0.4815	0.8025	1.8120	North	4.8805	4.9590	3.2760		
18	ACD	Grand Rapids	10036	Installation complete	9/23/2016	37 Ionia Ave. SW	South	1.0420	0.7670	0.2407	North	0.5438	0.3158	0.2086	South	5.2100	3.8350	1.2035	North	2.7180	2.9760	1.0470		
19	AT&T	Grand Rapids	GRRPD 035	Installation complete	3/8/2021	195 Oakes St. SW	North	1.3580	1.5080	1.5080	South	1.4010	1.1300	0.8154	North	6.7900	7.5400	7.5300	South	7.0050	5.6500	4.0770		
20	ACD	Grand Rapids	14307M	Installation complete	11/8/2019	187 S/8 Antoine St. SW	East	0.1123	0.1123	0.2728	West	0.2728	0.1123	0.2716	East	0.5615	0.5615	1.3640	South	1.3640	1.5615	1.3580		
21	ACD	Grand Rapids	14300	Installation complete	3/31/2017	1258 Division Ave. S	North	1.0670	1.0380	0.5930	South	0.4210	0.4750	0.3860	North	5.3350	5.1900	2.9650	South	2.1050	2.3750	1.9300		
22	ACD	Grand Rapids	14302M	Installation complete	11/8/2019	1209 Cass Ave. SE	South	1.6560	0.3270	1.1170	North	1.0620	0.7170	0.7410	South	8.2800	1.6350	5.5850	North	5.3100	3.5850	3.7050		
23	ACD	Grand Rapids	14306M	Installation complete	11/8/2019	732 Jefferson Ave. SE	South	0.1410	1.1390	1.0800	North	0.1420	0.2090	0.1570	South	0.7050	0.6950	0.5400	North	0.7100	1.0450	0.7850		
24	Mobilet	Grand Rapids	D99X519-B	Installation complete	3/6/2017	127 Wealthy St. SE	West	1.6180	1.3550	1.4670	East	1.2700	0.9910	1.0200	West	8.0900	6.7750	7.3350	East	6.3500	4.9550	5.1000		
25	ACD	Grand Rapids	10091M	Installation complete	11/8/2019	37 S/8 LaGrave Ave. SE	West	0.9940	0.8870	0.5270	East	1.1550	1.2240	0.7140	West	4.9700	4.4350	2.6350	East	5.7750	6.1200	3.5700		
26	AT&T	Grand Rapids	GRRPD 025	Installation complete	4/5/2021	102 Division Ave. S	North	0.2250	0.9850	0.3900	South	0.2250	1.2400	0.6790	North	1.1250	4.9250	1.9500	South	1.1250	0.6200	3.3950		
27	AT&T	Grand Rapids	GRRPD 024	Installation complete	3/4/2021	61 Fulton St. E	East	0.2470	0.4560	0.2820	West	0.2400	0.8320	0.3720	East	1.2350	2.2800	1.4100	West	1.2000	4.1600	1.8600		
28	ACD	Grand Rapids	10090M	Installation complete	11/8/2019	12 S/8 Fulton St. E	East	0.1740	0.2820	0.6130	West	0.2070	0.2150	0.1980	East	0.8700	1.4100	3.0650	West	1.0700	1.0700	0.9900		
29	ACD	Grand Rapids	10022M	Installation complete	11/8/2019	618 S/8 Dayton Ave. N	South	0.1850	1.4050	1.2130	North	0.1850	0.4390	0.1660	South	1.3250	2.1200	2.1500	North	2.0450	2.9550	0.8300		
30	ACD	Grand Rapids	10028M	Installation complete	11/8/2019	10 S/8 Crescent St. NE	West	1.0090	0.8130	0.5510	East	0.2230	0.2630	0.1900	West	5.0450	4.0650	2.7550	East	1.1150	1.3150	0.9500		
31	Mobilet	Grand Rapids	D99X518-D	Installation complete	1/26/2018	310 Lafayette Ave. NE	South	0.8130	0.4350	0.7950	North	0.4970	0.5050	0.3880	South	4.0650	2.1570	3.9750	North	2.4850	2.5250	1.9400		
32	Mobilet	Grand Rapids	D99X5497-C	Installation complete	1/31/2018	122 Claremont Pl. NE	North	0.1740	0.1080	0.1160	South	0.1490	0.9930	0.0910	North	0.8700	0.5400	0.5800	South	0.7450	4.9650	0.4550		
33	Mobilet	CE	D99X503-E	Installation complete	9/18/2017	419 Fountain St. NE	West	0.6780	0.9660	1.0980	East	0.5000	0.2980	0.3060	West	3.3900	4.8300	5.4900	East	2.5000	1.4950	1.5300		
34	ACD	Grand Rapids	10033M	Installation complete	11/8/2019	405 Lafayette Ave. SE	North	0.1820	0.6820	0.9550	South	0.2730	0.2650	0.1810	North	0.9100	3.4100	4.9750	South	1.3650	1.3250	0.9050		
35	ACD	Grand Rapids	14305M	Installation complete	11/8/2019	618 S/8 Madison Ave. SE	South	1.2650	1.5230	2.9750	North	0.3660	0.3060	0.3150	South	6.3250	7.6150	6.2850	North	1.8300	1.3500	1.5750		
36	ACD	Grand Rapids	14308M	Installation complete	11/8/2019	902 Madison Ave. SE	North	0.7540	0.3940	0.7420	South	0.2820	0.3600	0.5800	North	3.7700	1.9700	0.9100	South	1.4100	1.8000	2.9000		
37	Verizon	Verizon	40601	Installation complete	2/23/2021	1697 Union Ave. SE	East	0.8200	0.6850	0.4830	West	0.7930	1.0700	0.9840	East	4.1000	3.4250	3.7150	West	3.9650	5.0350	4.9200		
38	Verizon	Grand Rapids	40769	Installation complete	5/28/2021	1846 Ruby Place SE	North	1.2930	1.3120	1.3640	South	1.2280	0.6470	0.4260	North	6.4650	6.5600	6.8200	South	6.3400	3.2350	2.1300		
39	Verizon	Grand Rapids	40545	Installation complete	2/23/2021	1818 Ballard St. SE	West	1.8550	1.4050	1.2130	East	0.5500	0.3100	0.5310	West	5.9250	7.0250	6.0650	East	2.7500	1.5500	2.5000		
40	Verizon	CE	40755	Installation complete	2/23/2021	1013 Johnston St. SE	East	0.7090	0.6140	0.1640	West	0.1160	0.3890	0.9460	East	3.3450	3.0700	8.8200	West	0.5880	1.7900	4.7300		
41	Verizon	Grand Rapids	40541	Installation complete	2/23/2021	915 Temple St. SE	East	0.2940	0.4680	1.1150	East	0.6240	0.3950	0.4750	West	1.4700	2.3400	5.5950	East	3.1200	1.9750	2.3750		
42	Verizon	CE	40725	Installation complete	6/9/2020	1137 Marshall Ave. SE	West	1.0030	0.7740	0.1140	East	0.3630	0.4810	0.3190	West	5.0150	3.8700	0.5700	East	1.8150	2.4050	1.5950		
43	Verizon	Grand Rapids	40512	Installation complete	3/5/2021	826 Henry Ave. SE	South	0.6430	0.2280	0.6260	North	0.4080	0.4570	0.3930	South	3.2150	1.1400	1.3100	North	2.0400	2.2850	1.9650		
44	Verizon	Grand Rapids	40511	Installation complete	3/5/2021	696 Thomas St. SE	West	0.2760	0.4970	0.0910	East	0.0910	0.1570	0.5060	West	1.3800	2.4850	0.4550	East	0.4550	0.7850	2.5300		
45	Mobilet	Grand Rapids	D99X502-G	Installation complete	9/7/2018	524 Wealthy St. SE	West	0.2030	0.5770	0.6890	East	0.3880	0.1160	0.2480	West	1.0150	2.8850	3.4450	East	1.8400	0.5800	1.2400		
46	AT&T	Grand Rapids	GRRPD 023	Installation complete	3/8/2021	149 Fountain St. NE	East	1.1570	0.6120	0.2400	West	0.3810	0.6260	0.6170	East	5.7850	3.0600	1.2000	West	1.9050	3.2600	3.0850		
47	ACD	Grand Rapids	10035M	Installation complete	11/8/2019	429 Park Ave. NE	North	0.1010	1.1930	0.8500	South	0.3760	0.3240	0.3730	North	5.0500	5.9650	4.0000	South	1.8800	1.6200	1.86		

**Attachment #1 - Summary of Radio Frequency (RF) Power Density Testing - Occupational and Non-Occupational
City of Grand Rapids/ Small and Micro Cell Radio Frequency (RF) Power Density - Non-Occupational (2025 Modified Sites and Restests)**

Order	Small Cell	Pole Owner	Site ID	Site Status	Approved Date	Address	Measurements as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Occupational Limits						Measurement Conversions as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Non-Occupational Limits									
							Measurements at 6 feet above Ground			Measurements at 6 feet above Ground			Measurements at 6 feet above Ground			Measurements at 6 feet above Ground						
							Direction	Distance from Pole		Direction	Distance from Pole		Direction	Distance from Pole		Direction	Distance from Pole					
	10 ft.	50 ft.	100 ft.		10 ft.	50 ft.	100 ft.		10 ft.	50 ft.	100 ft.		10 ft.	50 ft.	100 ft.							
86	ACD	Grand Rapids	14323M	Installation complete	11/8/2019	2640 Breton Ave. SE	North	0.0911	0.6314	0.7225	South	0.6721	0.3852	0.2919	North	0.4555	3.1570	3.6125	South	3.3605	1.9260	1.4595
87	Verizon	CE	40805	Installation complete	3/5/2021	1902 Burton St. SE	East	0.3280	0.2427	0.1181	West	0.1246	0.0853	0.1378	East	1.6400	1.2135	0.5905	West	0.6230	0.4265	0.6890
88	Verizon	AT&T	40558	Installation complete	2/23/2021	2036 Kalamazoo Ave. SE	South	0.2886	0.1902	0.2296	North	0.1791	0.1660	0.2365	South	1.4430	0.9510	1.1480	North	0.8955	0.8300	1.1825
89	Verizon	Grand Rapids	40556	Installation complete	3/5/2021	1046 Marritt St. SE	East	0.3728	0.5976	0.4989	West	0.2493	0.1076	0.1738	East	1.8640	2.9880	2.4945	West	1.2465	0.5380	0.8690
90	Verizon	CE	40557	Installation complete	3/5/2021	810 Hazen St. SE	East	0.1843	0.4117	0.6316	West	0.4881	0.4604	0.3886	East	0.9215	2.0585	3.1580	West	2.4405	2.3020	1.9430
91	Verizon	Grand Rapids	40559	Installation complete	3/5/2021	1135 Merrifield St. SE	West	0.5969	0.7005	0.7545	East	0.5913	0.5685	0.3472	West	2.9845	3.5025	3.7725	East	2.9565	2.8425	1.7360
92	Verizon	Grand Rapids	40570	Installation complete	3/5/2021	2345 Blaine Ave. SE	South	0.2785	0.4103	0.2732	North	0.3030	0.1891	0.1242	South	1.3925	2.0515	1.3660	North	1.5150	0.9455	0.6210
93	Verizon	Grand Rapids	40572	Installation complete	3/5/2021	2448 Alveda Ave. SE	North	0.1264	0.4073	0.4736	South	0.4233	0.4539	0.3038	North	0.6320	2.0365	2.3680	South	2.1165	2.2695	1.5190
94	Mobilitie	Grand Rapids	DE90KS1YC-D	Installation complete	12/20/2016	2458 Eastern Ave. SE	South	0.3297	0.3673	0.3449	North	0.3486	0.2593	0.1837	South	1.6485	1.8365	1.7245	North	1.7490	1.2965	0.9185
95	Verizon	Grand Rapids	40583	Installation complete	3/5/2021	858 Mayhew Wood Dr. SE	East	0.2362	0.3411	0.3805	West	0.3728	0.2405	0.0970	East	1.1810	1.7055	1.9025	West	1.8640	1.2025	0.8850
96	Mobilitie	Grand Rapids	DE90KS1ZW-C	Installation complete	3/21/2018	2355 Division Ave. S	North	0.3017	0.3083	0.3542	South	0.4001	0.4318	0.4329	North	1.5085	1.5415	1.7710	South	2.0005	2.1590	2.1645
97	Mobilitie	Grand Rapids	DE90KS1ZV-A	Installation complete	3/6/2017	2214 Division Ave. S	North	0.1076	0.1612	0.3044	South	0.3541	0.3096	0.2471	North	0.5380	0.8060	1.5220	South	1.7705	1.5480	1.2355
98	Mobilitie	Grand Rapids	DE90KS1ZU-A	Installation complete	12/20/2016	222 Cutler St. SW	East	0.1290	0.4604	0.4915	West	0.3917	0.3638	0.3661	East	0.6450	2.3020	2.4575	West	1.9585	1.8190	1.8305
							Summary of Measurements above as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Occupational Limits															
							Max	1.6560	1.5230	1.5060	1.4010	1.2240	1.0200	8.2800	7.6150	7.5300	7.0050	6.1200	5.1000			
							Min	0.0620	0.0130	0.0240	0.0330	0.0124	0.0083	0.3100	0.0650	0.1200	0.1650	0.0620	0.0415			
							Median	0.2913	0.4007	0.3366	0.2740	0.2612	0.2476	1.4565	2.0033	1.6828	1.3700	1.3058	1.2378			
							Average	0.4615	0.4808	0.4418	0.3669	0.3641	0.3318	2.3075	2.4040	2.2089	1.8345	1.8203	1.6592			

- Notes:
 1. For a complete description of testing procedure, parameters and results - see Full Report
 2. All values presented as a percentage of 10 watt/meter squared for non-occupational maximum exposure
 3. Direction refers to measurement parallel to street direction
 4. Measurement at 6 feet above ground represents pedestrian height
 5. Above measurements are for active sites as of 6-20-25

Comparison of Maximum Permissible Limits (MPE) vs. Maximum Actual Measurements								
FCC Limits for MPE vs. Actual Measurements			Canada Limits for MPE vs. Actual Measurements					
Occup. Permissible Limit	5	mW/Cm2	50	W/M2	5	mW/Cm2	50	W/M2
Gen. Pub. Permissible Limit	1	mW/Cm2	10	W/M2	1	mW/Cm2	10	W/M2
Max Measurement at 6 Ft Above Ground	0.0828	mW/Cm2	0.828	W/M2	0.0828	mW/Cm2	0.828	W/M2

Measurement Parameters	
Instrument: Narda NBM-550-S with FCC probe #EA5091	
Measurements made at 6 feet above ground at 10 feet, 50 feet and 100 feet from the pole/cell base	
Measurements are broadband base and account for radio frequencies ranging from 300KHz to 50GHz	
Maximum Permissible Exposure (MPE) Power Densities in Watts/Meter Squared	
FCC (1.5-100GHz)	Canada (6-150GHz)
Occupational	50
General Public	10

Table 1. FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (minutes)
0.3-3.0	614	1.63	(100) ^a	6
3.0-30	1842/f	4.89/f	(900/f ²) ^a	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	(100) ^a	30
1.34-30	824/f	2.19/f	(180/f ²) ^a	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz ^aPlane-wave equivalent power density

ICNIRP Table 4. Reference levels for whole body exposure to time-varying far-field electric, magnetic and electromagnetic fields, from 100 kHz to 300 GHz (unperturbed rms values)^a.

Exposure Scenario	Frequency Range	E-field strength (V m ⁻¹)	H-field strength (A m ⁻¹)	Incident plane wave power density (S _{lim}) (W m ⁻²)
Occupational	0.1-20 MHz ^b	1220/f	4.9/f	---
	>20-30 MHz ^c	61	4.9/f	---
	>30-400 MHz ^c	61	0.16	10
	>400-2,000 MHz ^c	3/f ^{0.5}	0.008/f ^{0.5}	f/40
	>2-300 GHz ^d	---	---	50
General Public	0.1-20 MHz ^b	560/f	2.2/f	---
	>20-30 MHz ^c	28	2.2/f	---
	>30-400 MHz ^c	28	0.073	2
	>400-2,000 MHz ^c	1.375/f ^{0.5}	0.0037/f ^{0.5}	f/200
	>2-300 GHz ^d	---	---	10

Canada Safety Code 6

TABLE 5: Reference Levels for Electric Field Strength, Magnetic Field Strength and Power Density in Uncontrolled Environments

Frequency (MHz)	Electric Field Strength (E _{lim}) (V/m, RMS)	Magnetic Field Strength (H _{lim}) (A/m, RMS)	Power Density (S _{lim}) (W/m ²)	Reference Period (minutes)
10-20	27.46	0.0728	2	6
20-48	58.07 / f ^{0.25}	0.1540 / f ^{0.25}	8.944 / f ^{0.5}	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 / f ^{0.3467}	0.008335 / f ^{0.3467}	0.02619 / f ^{0.6934}	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000 / f ^{1.2}
150000-300000	0.158 / f ^{0.5}	4.21x10 ⁻⁴ / f ^{0.5}	6.67x10 ⁻⁵ / f	616000 / f ^{1.2}

Frequency, f, is in MHz

TABLE 6: Reference Levels for Electric Field Strength, Magnetic Field Strength and Power Density in Controlled Environments

Frequency (MHz)	Electric Field Strength (E _{lim}) (V/m, RMS)	Magnetic Field Strength (H _{lim}) (A/m, RMS)	Power Density (S _{lim}) (W/m ²)	Reference Period (minutes)
10-20	61.4	0.163	10	6
20-48	129.8 / f ^{0.25}	0.3444 / f ^{0.25}	44.72 / f ^{0.5}	6
48-100	49.33	0.1309	6.455	6
100-6000	15.60 / f ^{0.25}	0.04138 / f ^{0.25}	0.6455 / f ^{0.5}	6
6000-15000	137	0.364	50	6
15000-150000	137	0.364	50	616000 / f ^{1.2}
150000-300000	0.354 / f ^{0.5}	9.40x10 ⁻⁴ / f ^{0.5}	3.33x10 ⁻⁴ / f	616000 / f ^{1.2}

Frequency, f, is in MHz

Attachment #2 - Summary of Radio Frequency (RF) Power Density Testing - Non-Occupational (2022 Tests Compared to 2025 Retests)

City of Grand Rapids/ Small and Micro Cell Radio Frequency (RF) Power Density Testing - Non-Occupational

Count	Small Cell	Pole Owner	Site ID	Approved Date	Address	Results as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Non-Occupational Limits (2022)									Results as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Non-Occupational Limits (2025)								
						Measurements at 6 feet above Ground						Measurements at 6 feet above Ground											
						Distance from Pole			Distance from Pole			Distance from Pole			Distance from Pole								
						Direction	10 ft.	50 ft.	100 ft.	Direction	10 ft.	50 ft.	100 ft.	Direction	10 ft.	50 ft.	100 ft.	Direction	10 ft.	50 ft.	100 ft.		
1	AT&T	Grand Rapids	GRRPD 009	8/31/2021	3193 Leonard St. NE	North	2.2605	2.2755	2.1905	West	0.3200	0.9445	2.4055	South	0.4140	2.0700	0.1240	North	0.3725	0.4140	0.6620		
2	Mobilitie	Grand Rapids	DE90XS943-O	10/10/2017	1199 Ball Ave. NE	South	2.8970	2.8525	3.0745	West	2.2095	2.5940	2.2415	East	0.5380	0.2895	0.3310	West	0.6590	0.8645	0.6935		
3	ACD	Grand Rapids	16701	1/13/2017	1503 Alpine Ave. NW	North	0.5610	0.6980	0.4815	South	0.1855	0.4175	0.7665	North	2.2145	3.9615	3.1245	South	2.9885	3.1410	1.4910		
4	ACD	Consumers	16702	11/3/2017	1128 Muskegon Ave. NW	South	0.3365	0.8175	0.5935	North	0.8550	0.4345	0.5710	South	1.3640	0.7220	1.2035	North	1.2835	1.8455	2.4070		
5	Mobilitie	Grand Rapids	DE90XS1YV-F	12/20/2016	1006 5/8 Bridge St. NW	West	0.3780	0.0595	0.2190	East	0.1590	0.1395	0.0200	West	1.2715	0.4450	0.3210	East	0.5615	0.4010	0.1605		
6	ACD	Grand Rapids	10013	9/1/2017	370 Goodrich St. SW	East	0.1195	0.1195	0.0595	West	2.8500	0.1990	0.1195	West	6.0400	4.2450	3.5015	East	3.7820	3.3705	4.1730		
7	AT&T	Grand Rapids	GRRPD 030	1/2/2019	206 Fulton St. W	East	2.0175	0.2190	0.1395	North	0.4805	0.0640	0.5125	South	0.9295	0.9630	0.7825	North	1.2670	0.9630	1.0430		
8	ACD	Grand Rapids	10038	9/9/2016	105 5/8 Front Ave. NW	North	2.3900	2.9850	2.1900	South	2.9850	4.3800	0.7215	North	5.6250	5.5550	4.9170	South	2.0860	2.2465	2.4875		
9	ACD	Grand Rapids	10036	9/23/2016	37 lonia Ave. SW	West	1.5050	0.2390	0.2985	South	0.3185	0.2520	0.2390	South	5.2100	3.8500	1.2035	North	2.7190	1.5790	1.0430		
10	AT&T	Grand Rapids	GRRPD 035	3/8/2021	195 Oakes St. SW	West	0.2880	0.1395	0.1195	North	0.0400	0.1195	0.0400	North	6.7900	7.5400	7.5300	South	7.0050	5.6500	4.0770		
11	ACD	Grand Rapids	14300	3/31/2017	1258 Division Ave. SE	North	1.2445	0.4485	0.5345	South	1.3450	0.8645	0.3845	North	5.3350	5.1900	2.9650	South	2.1050	2.3750	1.9300		
12	Mobilitie	Grand Rapids	DE90XS19-B	3/6/2017	127 Wealthy St. SE	West	0.0995	0.6405	1.0480	East	0.3780	0.4975	0.3385	West	8.0900	6.7750	7.3350	East	6.3500	4.9550	5.1000		
13	AT&T	Grand Rapids	GRRPD 025	4/5/2021	102 Division Ave. S	South	0.7030	0.7000	0.2785	North	0.8680	0.5125	0.4485	North	1.1250	4.9250	1.9500	South	1.1250	0.6200	3.3950		
14	AT&T	Grand Rapids	GRRPD 024	3/4/2021	61 Fulton St. E	West	2.5285	2.4710	1.6125	East	0.1990	1.0570	0.2785	East	1.2350	2.2800	1.4100	West	1.2000	4.1600	1.8600		
15	Mobilitie	Grand Rapids	DE90XS518-D	1/26/2018	310 Lafayette Ave. NE	North	0.7900	0.3980	0.5970	South	1.0585	0.5910	0.8155	South	4.0650	2.1750	3.9750	North	2.4850	2.5250	1.9400		
16	Mobilitie	Grand Rapids	DE90XS497-C	1/31/2018	122 Claremont Pl. NE	South	0.9190	0.2190	0.2985	North	1.6975	0.1790	0.4775	North	0.8700	0.5400	0.5800	South	0.7450	4.9650	0.4550		
17	Mobilitie	CE	DE90XS503-E	9/18/2017	419 Fountain St. NE	North	0.8220	0.5175	0.5575	West	1.4410	0.5375	0.5775	West	3.3900	4.8300	5.4900	East	2.5000	1.4900	1.5300		
18	Verizon	Verizon	40601	2/23/2021	1697 Union Ave. SE	East	0.4775	0.6965	0.5775	West	0.2190	0.3385	0.3585	East	4.1000	3.4250	3.7150	West	3.9650	5.0350	4.9200		
19	Verizon	Grand Rapids	40769	5/28/2021	1846 Ruby Place SE	East	0.2985	0.3385	0.5575	West	0.5375	0.4775	0.3585	North	6.4650	6.5600	6.8200	South	6.1400	3.2350	2.1300		
20	Verizon	Grand Rapids	40545	3/12/2021	818 Ballard St. SE	East	0.6770	0.7765	0.7565	West	0.4975	0.5575	0.4775	West	5.9250	7.0250	6.0650	East	2.7500	1.5500	2.6550		
21	Verizon	CE	40755	2/23/2021	1013 Johnston St. SE	East	0.4580	0.4180	0.3185	West	0.2585	0.1395	0.1590	East	3.5450	3.0700	0.8200	West	0.5800	1.7900	4.7300		
22	Verizon	Grand Rapids	40541	2/23/2021	915 Temple St. SE	East	2.7220	1.8485	1.5370	West	1.6600	1.6835	1.8445	West	1.4700	2.3400	5.5950	East	3.1200	1.9750	2.3750		
23	Verizon	CE	40725	6/9/2020	1137 Marshall Ave. SE	East	2.4890	1.4730	1.1555	West	0.5670	0.5375	0.5280	West	5.0150	3.8700	0.5700	East	1.8150	2.4050	1.5950		
24	Verizon	Grand Rapids	40512	3/5/2021	826 Henry Ave. SE	North	0.4775	0.3980	0.4390	South	0.2985	0.2785	0.2785	South	3.2150	1.1400	1.3100	North	2.0400	2.2850	1.9650		
25	Verizon	Grand Rapids	40511	3/5/2021	696 Thomas St. SE	North	0.2240	0.6405	0.5315	South	0.9120	2.0115	0.8965	West	1.3800	2.4850	0.4550	East	0.4550	2.7850	2.5300		
26	Mobilitie	Grand Rapids	DE90XS502-G	9/7/2018	524 Wealthy St. SE	East	0.2585	0.1195	0.1395	West	0.3385	0.2785	0.1790	West	1.0150	2.8850	3.4450	East	1.8400	0.5800	1.2400		
27	AT&T	Grand Rapids	GRRPD 023	3/8/2021	149 Fountain St. NE	East	0.4180	0.4775	0.3780	South	3.3850	0.2985	0.2985	East	5.7850	3.0600	1.2000	West	1.9050	3.2600	3.0850		
28	AT&T	Grand Rapids	GRRPD 014	8/4/2021	1014 Fulton St. E	West	1.1210	0.7685	2.1135	East	1.2490	0.8645	0.4805	East	0.4600	0.6550	0.6250	West	0.2650	0.7050	0.8900		
29	AT&T	Grand Rapids	GRRPD 012	7/18/2018	10 Fuller Ave. NE	North	0.3780	0.4775	0.1590	South	0.8965	0.3105	2.3060	South	0.4900	0.8700	1.5750	North	1.3700	0.7450	0.6950		
30	ACD	Grand Rapids	10026	5/8/2018	1005 Baldwin St. SE	East	2.4020	2.8500	2.1455	South	1.3720	2.1135	2.2650	North	2.0400	2.3750	2.2500	East	0.9000	1.0350	0.9100		
31	Mobilitie	Grand Rapids	DE90XS1ZG-F	10/10/2017	110 Abney Ave. SE	North	0.2390	0.4180	0.3980	South	0.3185	0.4180	0.2985	South	0.4900	0.6200	0.8300	North	0.9100	1.1150	1.1350		
32	AT&T	Grand Rapids	GRRPD 013	10/23/2018	978 Churry St. SE	East	0.3385	0.2995	0.3585	West	0.3585	0.3385	0.3780	West	2.8500	3.9600	1.8500	East	1.3700	1.1050	1.5100		
33	AT&T	Grand Rapids	GRRPD 011	7/2/2018	240 Fuller Ave. SE	East	0.2190	0.5175	0.4775	South	2.3410	0.2985	0.4975	South	0.3750	0.9100	0.4550	North	0.6200	0.8300	0.8900		
34	Verizon	Grand Rapids	40439	3/8/2021	953 Fairmount St. SE	West	0.2785	0.3585	1.1210	North	0.3980	0.2985	0.0770	South	2.4200	1.7600	1.1900	North	2.4100	2.3350	2.7000		
35	Verizon	Grand Rapids	40449	3/12/2021	950 Wealthy St. SE	East	0.1990	0.4675	0.5375	West	0.3200	0.7045	0.8205	East	3.0300	2.8950	3.0100	West	2.7150	1.8550	1.4450		
36	Verizon	Grand Rapids	40444	3/12/2021	1433 Wealthy St. SE	East	1.6010	0.1195	0.8160	West	0.3780	0.2190	0.2585	North	4.7900	4.1150	0.7450	South	0.4550	0.5400	0.8700		
37	AT&T	Grand Rapids	GRRPD 010	2/28/2019	1426 Lake Dr. SE	East	0.4180	0.8750	2.1285	West	0.6405	1.6005	1.8730	South	1.3200	0.4020	5.4000	North	2.8300	1.0350	0.9100		
38	Verizon	CE	40706	2/23/2021	516 Fuller Ave. SE	North	1.6525	0.4975	0.8015	South	0.8870	0.8985	1.1485	North	6.0500	6.7550	2.9900	South	3.8900	2.1100	1.6600		
39	Verizon	AT&T	40510	7/1/2021	1055 Sherman St. SE	South	0.5575	0.3780	0.2985	North	0.3185	0.3270	0.4580	North	0.4550	0.3950	1.1400	South	0.9100	0.9500	0.9500		
40	Verizon	Grand Rapids	40505	3/12/2021	1258 Sherman St. SE	East	0.5775	0.5695	0.7105	West	0.7685	0.5990	1.4245	North	0.4550	0.3950	1.1400	South	0.9100	0.9500	0.9500		
41	AT&T	Grand Rapids	GRRPD 018	7/18/2018	1301 Dunham St. SE	East	0.3585	0.2390	0.7770	West	1.2795	1.4550	1.3700	South	0.8850	1.6900	3.8700	North	3.1850	3.9300	3.2800		
42	Verizon	Grand Rapids	40516	3/12/2021	1101 Bates St.	East	0.9365	0.4165	0.3195	West	0.4200	0.6030	0.6675	East	1.8750	2.2950	1.9700	West	3.2000	3.8350	3.5350		
43	Verizon	Grand Rapids	40513	3/5/2021	1325 Franklin St. SE	East	0.8005	1.0890	1.1530	West	2.1535	0.9285	0.2985	West	0.5700	0.0650	0.3750	East	0.3300	0.1250	0.2900		
44	ACD	Grand Rapids	14309	6/5/2018	829 5/8 Franklin St. SE	East	0.5390	1.0890	0.6300	West	0.8645	1.0870	1.0665	West	0.3750	0.7050	0.7450	East	1.0750	0.7850	0.8700		
45	Verizon	AT&T	40528	2/25/2021	1035 Alexander St. SE	East	1.4490	2.0555	2.0255	West	2.1405	2.8485	3.5320	West	1.3500	1.5400	0.4900	East	0.5400	0.8300	0.5800		
46	Verizon	Verizon	40540	12/16/2020	1127 Noble St. SE	North	2.4020	1.3130	0.3200	South	1.3770	0.9235	2.1645	East	0.7550	0.3300	0.4150	West	0.5200	0.5200	0.3950		
47	Verizon	AT&T	40739	12/22/2020	1404 Kalamazoo Ave. SE	North	1.9865	0.7365	0.8005	South	2.1030	2.4345	2.1500	North	0.6100	0.6550	0.7050	South	0.7050	0.8550	1.2300		
48	Verizon	Grand Rapids	40543	3/3/2021	1058 Boston St. SE	East	2.6165	0.4510	0.3780	West	0.3780	0.4180	0.3385	East	0.4900	0.6200	1.2000	West	0.6050	0.6600	0.8300		
49	Verizon	AT&T	40544	1/21/2021	1714 Kalamazoo Ave. SE	North	0.1395	0.0995	0.1590	South	0.1590	0.1990	0.0200	North	0.6600	1.2200	1.2650	South	0.6200	0.9950	0.9500		
50	Verizon	Verizon	40547	1/21/2021	1775 Silver Ave. SE	East	0.5775	0.6965	0.8160	West	0.3780	0.4380	0.4380	South	3.0550	3.3200	2.1900	North	1.5750	1.0750	1.9100		
51	Verizon	Verizon	40549	2/23/2021	1818 Giddings Ave. SE	North	0.1395	0.1590	0.1395	South	0.1395	0.3980	0.0785	South	2.7200	2.6435	2.6975	North	1.4630	1.2490	1.2420		
52	Verizon	Grand Rapids	40550	3/3/2021	1133 Elliott St. SE	East	0.3780	0.3385	0.6750	West	1.3770	1.0890	0.7565	North	1.3245	1.5730	1.5730	South	0.2485	0.0620	0.0415		
53	Verizon	Grand Rapids	40795	3/5/2021	1734 Griggs St. SE	East	0.2585	0.2390	0.0595	West	0.3980	0.2785	0.2390	East	0.5035	0.6350	0.5450	West	0.7865	0.6620	0.5795		
54	Verizon	AT&T	40801	12/16/2020	1844 Evergreen St. SE	East	1.3450	0.2560	0.0640	West	0.3265	0.3485	0.4570	West	0								

Attachment #2 - Summary of Radio Frequency (RF) Power Density Testing - Non-Occupational (2022 Tests Compared to 2025 Retests)

City of Grand Rapids/ Small and Micro Cell Radio Frequency (RF) Power Density Testing - Non-Occupational

						Results as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Non-Occupational Limits (2022)						Results as Percentage (%) of Maximum Permissible Exposure (MPE) for FCC Non-Occupational Limits (2025)									
						Measurements at 6 feet above Ground						Measurements at 6 feet above Ground									
Count	Small Cell	Pole Owner	Site ID	Approved Date	Address	Direction	Distance from Pole			Direction	Distance from Pole			Direction	Distance from Pole			Direction	Distance from Pole		
							10 ft.	50 ft.	100 ft.		10 ft.	50 ft.	100 ft.		10 ft.	50 ft.	100 ft.				
63	Verizon	CE	40557	3/5/2021	810 Hazen St. SE	East	0.3780	0.3385	0.5175	West	0.3980	0.4580	0.4180	East	0.9215	2.0585	3.1580	West	2.4405	2.3020	1.9430
64	Verizon	Grand Rapids	40559	3/5/2021	1135 Merrifield St. SE	East	0.1990	0.0795	0.1195	West	0.0795	0.2390	0.1395	West	2.9845	3.5025	3.7725	East	2.9565	2.8425	1.7360
65	Verizon	Grand Rapids	40570	3/5/2021	2345 Blaine Ave. SE	East	0.4580	0.8645	1.6975	West	0.7365	0.9930	0.6085	South	1.3925	2.0515	1.3660	North	1.5150	0.9455	0.6210
66	Verizon	Grand Rapids	40572	3/5/2021	2448 Aleda Ave. SE	East	1.0250	0.4485	0.3185	West	0.2585	0.3585	2.1135	North	0.6320	2.0365	2.3680	South	2.1165	2.2695	1.5190
67	Mobilitie	Grand Rapids	DE90XS1YC-D	12/20/2016	2458 Eastern Ave. SE	East	1.5050	0.3525	0.2985	West	0.2190	0.8005	0.3515	South	1.6485	1.8365	1.7245	North	1.7430	1.2965	0.9185
68	Verizon	Grand Rapids	40583	3/5/2021	858 Mayhew Wood Dr. SE	East	0.1790	0.4380	0.6570	West	0.0980	0.3185	0.3385	East	1.1810	1.7055	1.9025	West	1.8640	1.2025	0.4850
69	Mobilitie	Grand Rapids	DE90XS1ZW-C	3/21/2018	2355 Division Ave. S	North	3.0105	0.0400	0.0595	South	0.2985	1.6335	1.4410	North	1.5085	1.5415	1.7710	South	2.0005	2.1590	2.1645
70	Mobilitie	Grand Rapids	DE90XS1ZV-A	3/6/2017	2214 Division Ave. S	North	0.6265	0.1955	0.4580	South	0.3585	0.1590	0.2585	North	0.5380	0.8060	1.5220	South	1.7705	1.5480	1.2355
71	Mobilitie	Grand Rapids	DE90XS1ZU-A	12/20/2016	222 Cutler St. SW	North	0.2985	0.0975	0.1395	South	0.2390	0.0795	0.1990	East	0.6450	2.3020	2.4575	West	1.9585	1.8190	1.8305
72	ACD	Grand Rapids	16704M	11/8/2019	1432 Scribner Ave. NW	North	0.4205	0.0655	0.0655	South	0.3150	0.2450	0.4205	North	3.4335	2.6020	1.7695	South	1.4185	3.5590	1.5290
73	ACD	Grand Rapids	16703M	11/8/2019	890 Seward Ave. NW	North	0.1790	0.4380	0.2985	South	0.2985	0.0995	0.1790	North	1.2415	1.6850	1.9255	South	1.1230	0.9630	0.9630
74	ACD	Grand Rapids	16402M	11/8/2019	219 Jackson Pl. NW	South	0.1790	0.3980	0.0995	North	1.1710	0.3385	0.2985	North	1.2035	0.8825	0.4815	South	0.5615	0.5615	0.7220
75	ACD	Grand Rapids	16401M	11/8/2019	30 Marion Ave. NW	South	0.4580	0.6170	0.5775	North	1.5910	0.6170	1.6845	South	2.8265	1.5045	1.2035	North	0.8825	2.0860	1.8455
76	ACD	Grand Rapids	10037M	11/8/2019	198 5/8 Scribner Ave. NW	South	0.0320	0.0795	0.1195	North	1.4895	0.2985	1.1850	North	0.4010	2.4070	0.4010	South	0.4815	3.5425	3.7695
77	ACD	Grand Rapids	10030M	11/8/2019	243 5/8 Michigan St. NW	East	1.6680	0.1790	0.0995	West	1.4090	0.9605	3.4265	East	3.4970	3.7465	3.8590	West	2.9085	4.4280	4.6930
78	ACD	Grand Rapids	16705M	11/8/2019	700 Scribner Ave. NW	North	0.3585	0.5775	0.2585	South	0.4380	0.1990	0.6370	North	3.6965	6.0250	5.7250	South	2.8005	2.5960	2.6190
79	ACD	Grand Rapids	10027M	11/8/2019	81 5/8 Lyon St. NW	East	1.1950	0.8665	0.6085	West	0.9565	1.1095	1.2930	West	2.3270	1.7650	3.7875	East	5.5100	2.8385	3.6240
80	ACD	Grand Rapids	10016M	6/11/2019	135 5/8 Monroe Center St. NW	East	0.7115	0.6310	0.6310	West	0.6585	0.6795	0.7835	South	0.4815	0.8025	1.8120	North	4.8805	4.5950	3.2760
81	ACD	Grand Rapids	14307M	11/8/2019	187 5/8 Antoine St. SW	East	0.1590	0.1590	0.6960	West	0.2240	1.3155	0.6170	East	0.5615	0.5615	1.3640	South	1.3640	0.5615	1.3580
82	ACD	Grand Rapids	14302M	11/8/2019	1209 Cass Ave. SE	East	0.4805	0.2985	0.5175	West	1.6655	0.2785	0.1395	South	8.2800	1.6350	5.5850	North	5.3100	3.5850	3.7050
83	ACD	Grand Rapids	14306M	11/8/2019	732 Jefferson Ave. SE	North	0.6290	0.3780	0.3585	South	0.4775	0.3185	0.1790	South	0.7050	0.6950	0.5400	North	0.7100	1.0450	0.7850
84	ACD	Grand Rapids	10091M	11/8/2019	37 5/8 LaGrave Ave. SE	North	0.8645	1.5485	2.0485	South	3.1815	2.4080	1.1665	West	4.9700	4.4350	2.6350	East	5.7750	6.1200	3.5700
85	ACD	Grand Rapids	10090M	11/8/2019	12 5/8 Fulton St. E	West	0.3525	0.1590	0.5305	East	1.8590	1.9940	2.1770	East	0.8700	1.4100	3.0650	East	1.0350	1.0750	0.9900
86	ACD	Grand Rapids	10022M	11/8/2019	216 5/8 Division Ave. N	North	0.2985	0.4775	0.2390	South	0.6430	0.5375	0.3780	North	1.3250	2.1200	2.1500	South	2.0450	2.1950	0.8300
87	ACD	Grand Rapids	10028M	11/8/2019	10 5/8 Crescent St. NE	East	0.5765	1.3340	0.4585	West	0.7045	0.6405	0.5125	West	5.0450	4.0650	2.7550	East	1.1150	1.3150	0.9500
88	ACD	Grand Rapids	10033M	11/8/2019	405 Lafayette Ave. SE	West	0.0320	0.1990	0.0400	South	1.7935	0.2390	0.2785	North	0.9100	3.4100	4.9750	South	1.3650	1.3250	0.9050
89	ACD	Grand Rapids	14305M	11/8/2019	618 5/8 Madison Ave. SE	North	1.2790	0.6370	0.8230	South	1.1840	0.9365	1.3770	South	6.3250	7.6150	6.2850	North	1.8300	1.5300	1.5750
90	ACD	Grand Rapids	14308M	11/8/2019	902 Madison Ave. SE	North	4.7075	3.6420	3.3305	South	2.7210	3.2985	3.2345	North	3.7700	1.9700	0.9100	South	1.4100	1.8000	2.9000
91	ACD	Grand Rapids	10035M	11/8/2019	429 Paris Ave. NE	North	0.4380	1.0975	0.3385	South	0.9280	0.7990	0.6075	North	5.0500	5.9650	4.0000	South	1.8800	1.6200	1.8650
92	ACD	Grand Rapids	14350M	11/8/2019	321 5/8 Richard Terrace SE	North	1.8840	0.3780	0.4380	South	0.4775	0.4775	0.4580	West	1.5550	0.1650	0.3300	East	0.1650	0.6550	0.7850
93	ACD	Parks	14354M	11/8/2019	782 5/8 Fuller Ave. SE	North	0.4380	0.4580	0.4975	South	0.4180	0.2585	0.3585	North	0.3750	0.3400	0.3300	South	0.4150	0.4550	0.3750
94	ACD	Grand Rapids	14317M	11/8/2019	1601 Fuller Ave. SE	East	2.1440	2.8760	2.4120	West	2.6045	1.6335	1.7430	South	1.6750	1.2800	1.0550	South	0.2900	4.9650	0.5380
95	ACD	Grand Rapids	10054M	11/8/2019	2350 Elliott St. SE	East	1.0905	1.6425	1.3585	West	0.7185	0.5660	0.3290	West	0.3100	0.1240	0.1200	East	0.4965	0.7450	0.7975
96	ACD	Grand Rapids	10060M	11/8/2019	3433 Lake Eastbrook Blvd. SE	North	0.1195	0.1590	0.3385	South	0.3780	0.4580	0.2390	West	1.3440	0.9105	0.9935	East	1.2420	1.0350	0.6620
97	ACD	Grand Rapids	10061M	11/8/2019	2321 Raybrook St. SE	East	0.4775	0.4580	0.6370	West	0.5375	0.5575	0.4380	East	2.8145	3.4415	2.6940	West	1.2770	0.9130	0.7450
98	ACD	Grand Rapids	14323M	11/8/2019	2640 Breton Ave. SE	North	1.4730	0.5125	0.1195	South	2.1930	0.4510	0.7840	North	0.4555	3.1570	3.6125	South	3.3605	1.9260	1.4595

Radio Frequency (RF) Power Density Testing - Non-Occupational												
Max	4.7075	3.6420	3.3305	3.3850	4.3800	3.5320	8.2800	7.6150	7.5300	7.0050	6.1200	5.1000
Min	0.0320	0.0400	0.0400	0.0400	0.0640	0.0200	0.3100	0.0650	0.1200	0.1650	0.0620	0.0415
Median	0.5098	0.4575	0.4795	0.5523	0.4775	0.4775	1.4565	2.0033	1.6828	1.3700	1.3058	1.2378
Average	0.8849	0.6934	0.6932	0.8896	0.7494	0.7857	2.3075	2.4040	2.2089	1.8345	1.8203	1.6592