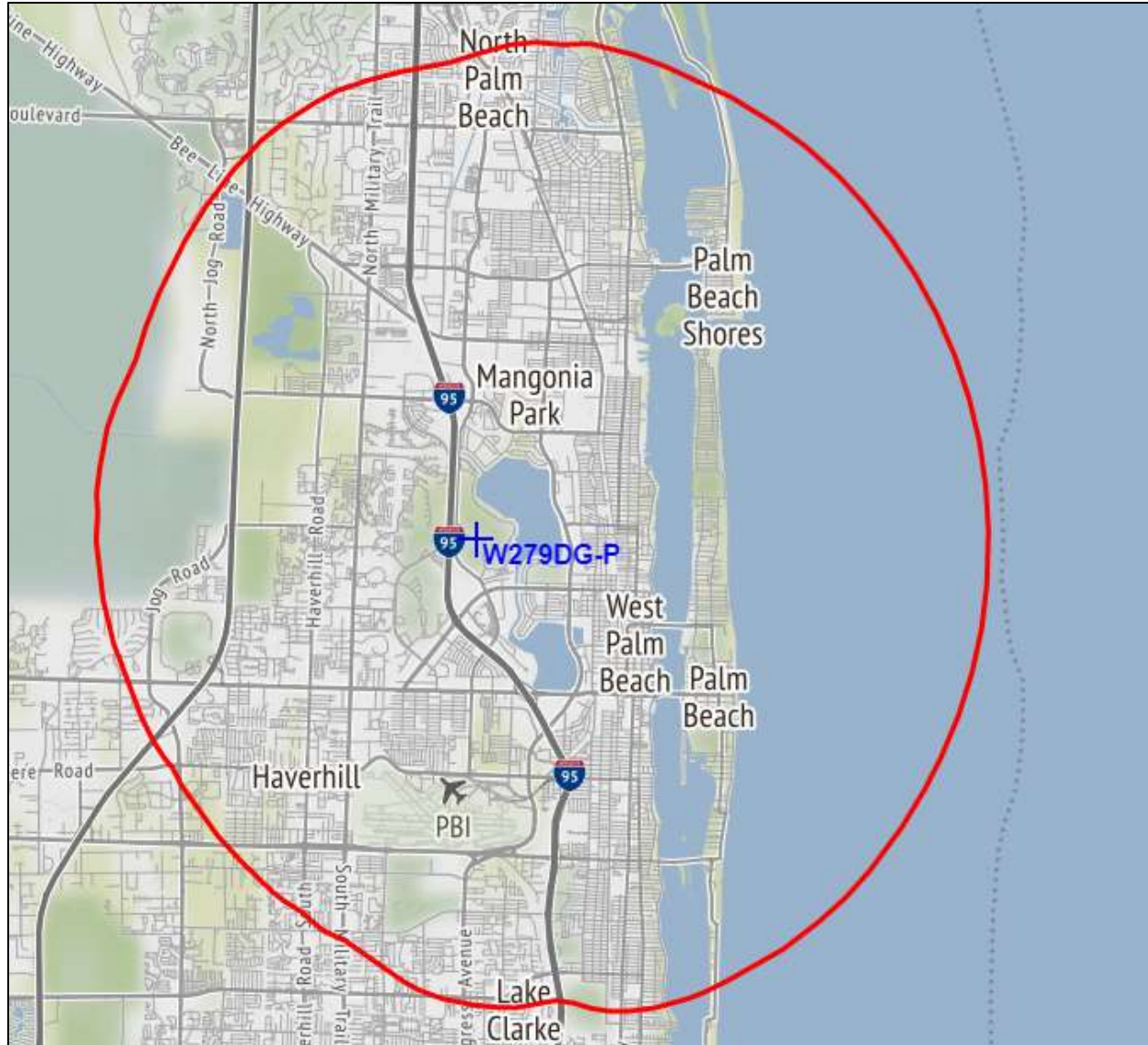




REC Networks
11541 Riverton Wharf Rd.
Mardela Springs, MD 21837
844.REC.LPFM/202.621.2355
recnet.com

Minor CP Modification for **W279DG**
WEST PLAM BEACH, FL
Q-BROADCASTING CORPORATION, INC.
BMPFT-20180117ADK

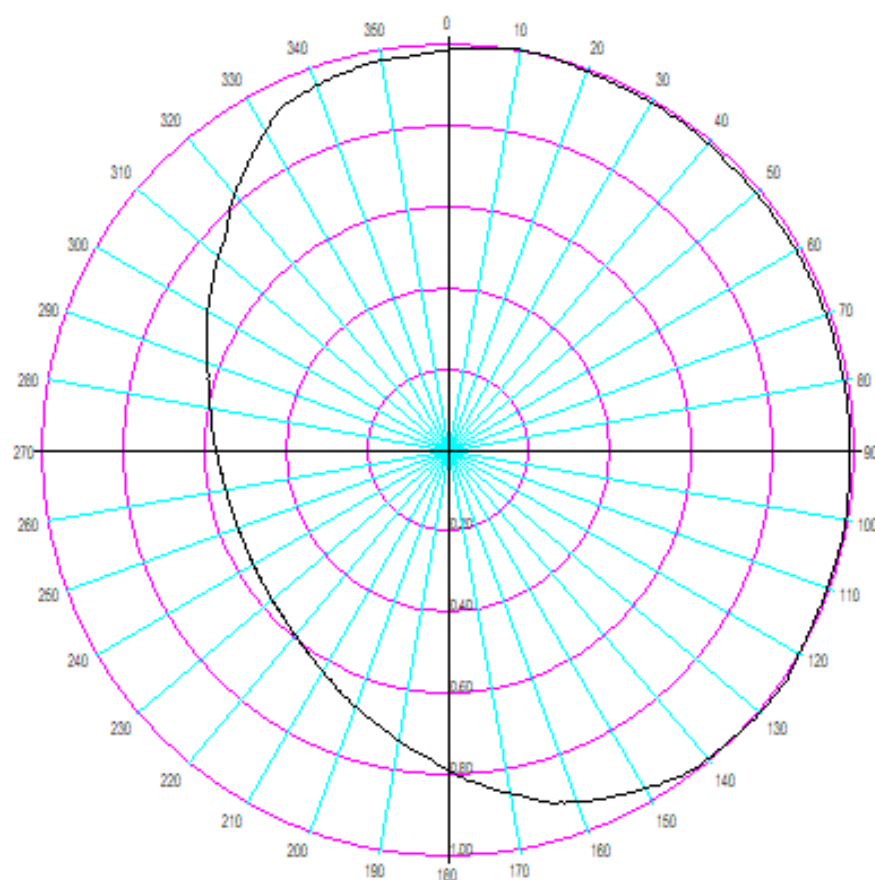
PROPOSED 60dBu F(50,50) SERVICE CONTOUR



WEST PALM BEACH, FL – Channel 279D (103.7 MHz) ~ ERP 0.250 kW
Elev: 4 meters ~ RCAGL: 66 meters ~ RCAMSL: 70 meters ~ HAAT: 68 meters
Overall tower height: 72.1 meters – ASR: None (20-foot rule)
NAD27 Latitude: 26° 43' 59.7" NL – Longitude: 80° 05' 10.6" WL
NAD83 Latitude: 26° 44' 00.9" NL – Longitude: 80° 05' 09.7" WL

Site: W279DG(PROP)
 Coordinates: 26-43-59.7 N, 80-05-10.6 W
 Freq: 103.70000 MHz
 ERP: 250.00 W

Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	242.56	65	0	10.46	26.827377	-80.086278
5	247.01	67	0	10.65	26.828721	-80.076918
10	250.00	67	0	10.69	26.827894	-80.067576
15	249.00	68	0	10.75	26.826617	-80.058242
20	245.52	68	0	10.71	26.823775	-80.049355
25	244.04	68	0	10.70	26.820425	-80.040723
30	244.04	69	0	10.77	26.817108	-80.032021
35	244.04	69	0	10.77	26.812566	-80.024040
40	243.54	69	0	10.76	26.807385	-80.016565
45	241.57	69	0	10.74	26.801542	-80.009743
50	241.57	69	0	10.74	26.795325	-80.003368
55	241.57	69	0	10.74	26.788635	-79.997626
60	241.57	69	0	10.74	26.781524	-79.992559
65	241.57	69	0	10.74	26.774045	-79.988206
70	241.57	70	0	10.81	26.766462	-79.983966
75	241.57	69	0	10.74	26.758216	-79.981769
80	241.57	69	0	10.74	26.749986	-79.979734
85	241.57	69	0	10.74	26.741629	-79.978510
90	241.57	69	0	10.74	26.733209	-79.978106
95	242.06	69	0	10.75	26.724785	-79.978476
100	244.04	69	0	10.77	26.716393	-79.979508
105	244.04	69	0	10.77	26.708147	-79.981562
110	244.04	69	0	10.77	26.700091	-79.984413
115	244.04	69	0	10.77	26.692289	-79.988039
120	246.51	69	0	10.79	26.684681	-79.992185
125	250.00	69	0	10.83	26.677355	-79.996987
130	249.00	69	0	10.82	26.670676	-80.002858
135	246.02	69	0	10.79	26.664617	-80.009501
140	244.53	69	0	10.77	26.659013	-80.016591
145	239.61	69	0	10.72	26.654254	-80.024397
150	229.92	69	0	10.62	26.650556	-80.032865
155	220.43	69	0	10.51	26.647593	-80.041592
160	210.68	69	0	10.39	26.645421	-80.050514
165	198.92	68	0	10.17	26.644865	-80.059782
170	182.76	66	10	9.82	26.646248	-80.069114
175	169.33	68	10	9.77	26.645682	-80.077706
180	155.24	69	0	9.63	26.646634	-80.086278
185	141.00	69	10	9.40	26.649051	-80.094520
190	131.04	69	10	9.22	26.651589	-80.102388
195	120.41	68	10	8.95	26.655508	-80.109585
200	112.56	68	10	8.79	26.658945	-80.116538
205	104.98	68	0	8.63	26.662904	-80.122981
210	97.34	68	0	8.45	26.667400	-80.128818
215	91.81	68	0	8.32	26.671964	-80.134294
220	87.32	68	0	8.20	26.676741	-80.139334
225	83.52	68	0	8.10	26.681741	-80.143912
230	80.94	68	0	8.02	26.686846	-80.148156
235	78.96	68	0	7.97	26.692107	-80.152020
240	77.56	69	0	7.99	26.697291	-80.155959
245	76.45	68	0	7.91	26.703164	-80.158456
250	76.45	68	10	7.91	26.708897	-80.161118
255	76.73	69	10	7.97	26.714671	-80.163815
260	78.12	68	10	7.95	26.720810	-80.165126
265	79.52	68	10	7.99	26.726967	-80.166394
270	82.08	68	10	8.06	26.733227	-80.167409
275	85.56	68	10	8.15	26.739618	-80.168078
280	89.10	67	0	8.18	26.746005	-80.167425
285	93.94	67	0	8.30	26.752558	-80.167071
290	100.17	66	10	8.39	26.759029	-80.165667
295	108.24	64	10	8.44	26.765296	-80.163298
300	117.65	63	0	8.56	26.771745	-80.160995
305	126.74	63	0	8.74	26.778311	-80.158391
310	138.01	63	0	8.94	26.784903	-80.155256
315	149.77	63	0	9.13	26.791321	-80.151349
320	168.92	63	0	9.43	26.798183	-80.147331
325	185.33	63	0	9.65	26.804346	-80.142061
330	204.76	63	10	9.89	26.810310	-80.136132
335	221.37	63	10	10.09	26.815478	-80.129245
340	228.01	63	10	10.16	26.819143	-80.121310
345	232.81	63	10	10.22	26.822012	-80.112930
350	236.68	63	10	10.26	26.824121	-80.104233
355	237.66	63	10	10.27	26.825262	-80.095299

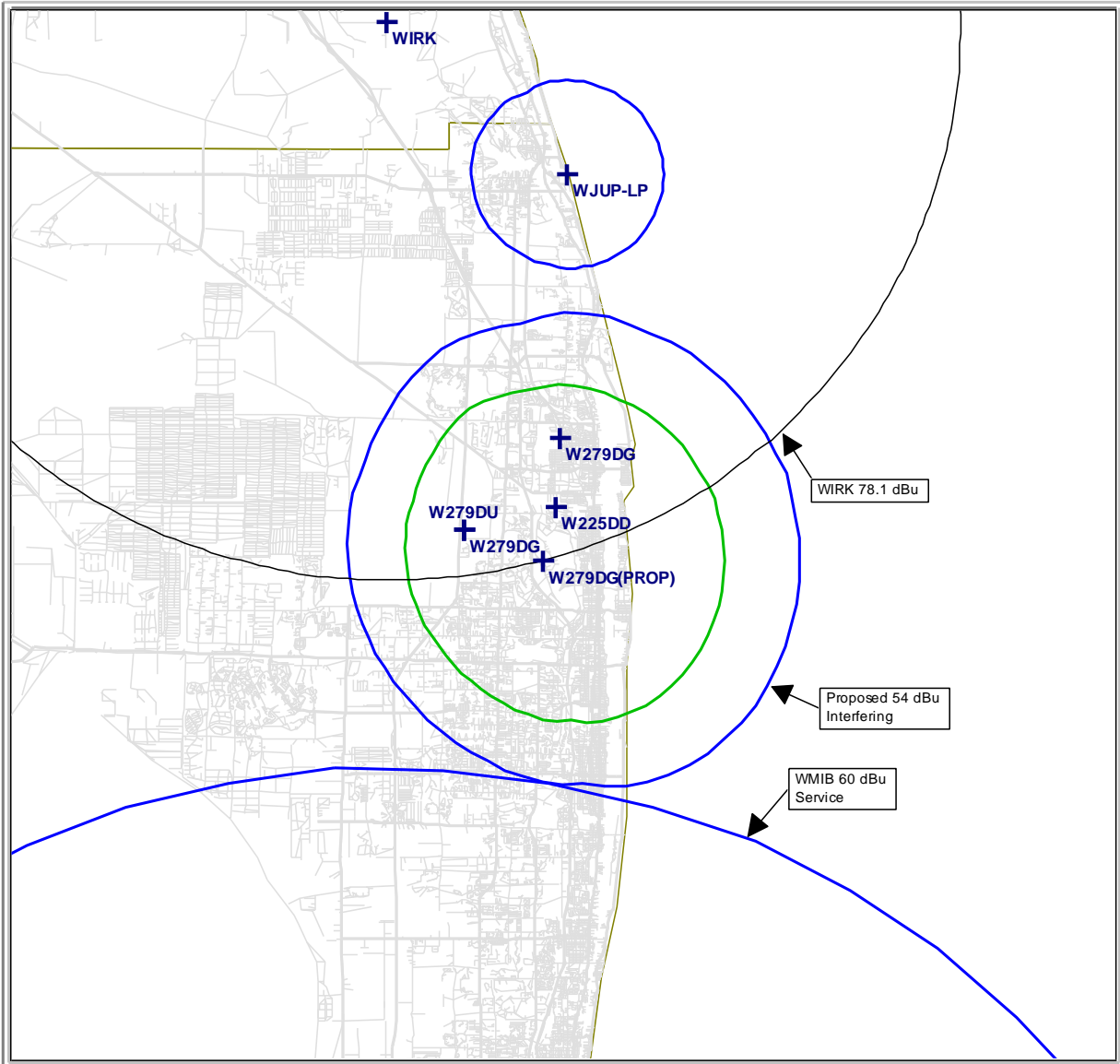


Azim	Rcl.FS	ERP [W]	dBk	Azim	Rcl.FS	ERP [W]	dBk	Azim	Rcl.FS	ERP [W]	dBk	Azim	Rcl.FS	ERP [W]	dBk
0.0	0.983	242.556	-6.152	90.0	0.983	241.572	-6.170	180.0	0.788	155.236	-8.090	270.0	0.573	82.082	-10.858
5.0	0.994	247.009	-6.073	95.0	0.984	242.064	-6.161	185.0	0.751	141.000	-8.508	275.0	0.585	85.556	-10.677
10.0	1.000	250.000	-6.021	100.0	0.988	244.036	-6.125	190.0	0.724	131.044	-8.826	280.0	0.597	89.102	-10.501
15.0	0.998	249.001	-6.038	105.0	0.988	244.036	-6.125	195.0	0.694	120.409	-9.193	285.0	0.613	93.942	-10.271
20.0	0.991	245.520	-6.099	110.0	0.988	244.036	-6.125	200.0	0.671	112.560	-9.486	290.0	0.633	100.172	-9.993
25.0	0.988	244.036	-6.125	115.0	0.988	244.036	-6.125	205.0	0.648	104.976	-9.789	295.0	0.658	108.241	-9.656
30.0	0.988	244.036	-6.125	120.0	0.993	246.512	-6.082	210.0	0.624	97.344	-10.117	300.0	0.686	117.649	-9.294
35.0	0.988	244.036	-6.125	125.0	1.000	250.000	-6.021	215.0	0.606	91.809	-10.371	305.0	0.712	126.736	-8.971
40.0	0.987	243.542	-6.134	130.0	0.998	249.001	-6.038	220.0	0.591	87.320	-10.589	310.0	0.743	138.012	-8.601
45.0	0.983	241.572	-6.170	135.0	0.992	246.016	-6.090	225.0	0.578	83.521	-10.782	315.0	0.774	149.769	-8.246
50.0	0.983	241.572	-6.170	140.0	0.989	244.530	-6.117	230.0	0.569	80.940	-10.918	320.0	0.822	168.921	-7.723
55.0	0.983	241.572	-6.170	145.0	0.979	239.610	-6.205	235.0	0.562	78.961	-11.026	325.0	0.861	185.330	-7.321
60.0	0.983	241.572	-6.170	150.0	0.959	229.920	-6.384	240.0	0.557	77.562	-11.103	330.0	0.905	204.756	-6.888
65.0	0.983	241.572	-6.170	155.0	0.939	220.430	-6.567	245.0	0.553	76.452	-11.166	335.0	0.941	221.370	-6.549
70.0	0.983	241.572	-6.170	160.0	0.918	210.681	-6.764	250.0	0.553	76.452	-11.166	340.0	0.955	228.006	-6.421
75.0	0.983	241.572	-6.170	165.0	0.892	198.916	-7.013	255.0	0.554	76.729	-11.150	345.0	0.965	232.806	-6.330
80.0	0.983	241.572	-6.170	170.0	0.855	182.756	-7.381	260.0	0.559	78.120	-11.072	350.0	0.973	236.682	-6.258
85.0	0.983	241.572	-6.170	175.0	0.823	169.332	-7.713	265.0	0.564	79.524	-10.995	355.0	0.975	237.656	-6.241

ComStudy 2.2 search of channel 279 (103.7 MHz Class D) at 26-43-59.7 N, 80-05-10.6 W.

CALL WIRK	CITY INDIANTOWN	ST CHN CL FL 276 C1	DIST 33.63	SEP 0.00	BRNG 344.3	CLEARANCE -18.68 dB
* See waiver request						
WMIB	FORT LAUDERDALE	FL 278 C	85.75	0.00	188.2	-0.04 dB
W279DG	WEST PALM BEACH	FL 279 D	7.41	0.00	8.0	-73.30 dB
* Currently licensed facility						
W279DU	WEST PALM BEACH	FL 279 D	4.94	0.00	291.7	-38.50 dB
* Contingent with this application, change to Channel 281D and relocated						
* to same building as the instant application.						
WQOL	VERO BEACH	FL 279 C2	116.96	0.00	341.9	10.81 dB
WJUP-LP	JUPITER	FL 280 LP100	23.23	0.00	3.6	2.30 dB
W280FV	MIAMI	FL 280 D	83.51	0.00	187.4	29.20 dB
W280DU	BOCA RATON	FL 280 D	41.17	0.00	192.1	5.03 dB
WXKB	CAPE CORAL	FL 280 C	157.62	0.00	257.7	24.66 dB
W279DG	WEST PALM BEACH	FL 281 D	4.94	0.00	291.7	-17.64 dB
* Currently authorized facility being modified on the instant application.						
* Note that commonly-owned w279DU is being proposed to be modified to this						
* same building on Channel 281D. The grant of the instant application should						
* be contingent on that grant.						
WSFS	MIRAMAR	FL 282 C1	83.50	0.00	187.4	5.04 dB

W279DG Minor Mod



REQUEST FOR WAIVER OF §74.1204(a)

W279DG
West Palm Beach, FL
Channel 279D (103.7 MHz)

The facility proposed in the instant application is inside the 60 dBu protected contour of WIRK, Indiantown, Florida. WIRK operates on Channel 276C1 with an effective radiated power (ERP) of 90 kW at 297 meters height above average terrain (HAAT) into a non-directional antenna. WIRK places a 78.1 dBu service contour at the proposed site.

Using the U/D method¹, the proposed facility is predicted to produce an undesired interference overlap in respect to WIRK to the proposed facility's 118.1 dBu interfering contour ("overlap zone"). At 250 watts ERP, the overlap extends to 138 meters using the free space equation.

The proposed site is on a rooftop and will be mounted at a radiation center at 66 meters above ground level. The highest occupied point of the building, which is considered 6 feet above the floor of the highest landing of the highest occupied floor of the building is located at 51 meters above ground level ("occupation level"). The antenna will be mounted in a location on the roof that is no more than 24 meters from the edge of the roof.

Applicant proposes to use a 3-bay Nicom BKG-88 circularly polarized antenna at half wave spacing. According to manufacturer's specifications, the overlap zone will reach points below the occupation level along the -10, -15, -20, -25 and -30 depression angles from the radiation center. Along these depression angles, the overlap zone intersects the occupation level as follows:

Depression angle	Distance to overlap zone	Distance from tower base overlap zone intersects occupation level (51 m)	Distance from building edge	Overlap zone height above ground level
-10	123.67 m	85.1 m	61.1 m	44.5 m
-15	105.73 m	56.0 m	32.0 m	38.6 m
-20	84.06 m	41.2 m	17.2 m	37.1 m
-25	60.87 m	32.2 m	8.2 m	40.1 m
-30	38.92 m	26.0 m	2.0 m	46.3 m

Due to the design of the antenna, the overlap zone skirts outside of the building but does not reach any point inside the building's occupied area (i.e. below the 51-meter level). The overlap zone long these depression angles also does not reach any occupied part of any nearby building including the -5 degree depression angle which comes close to but does not penetrate a nearby tall structure 130 meters from the base of the antenna structure.

¹ - See *Living Way Ministries, Inc.* Memorandum Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5. *Recon denied* 23 FCC Rcd 15070 (2008).

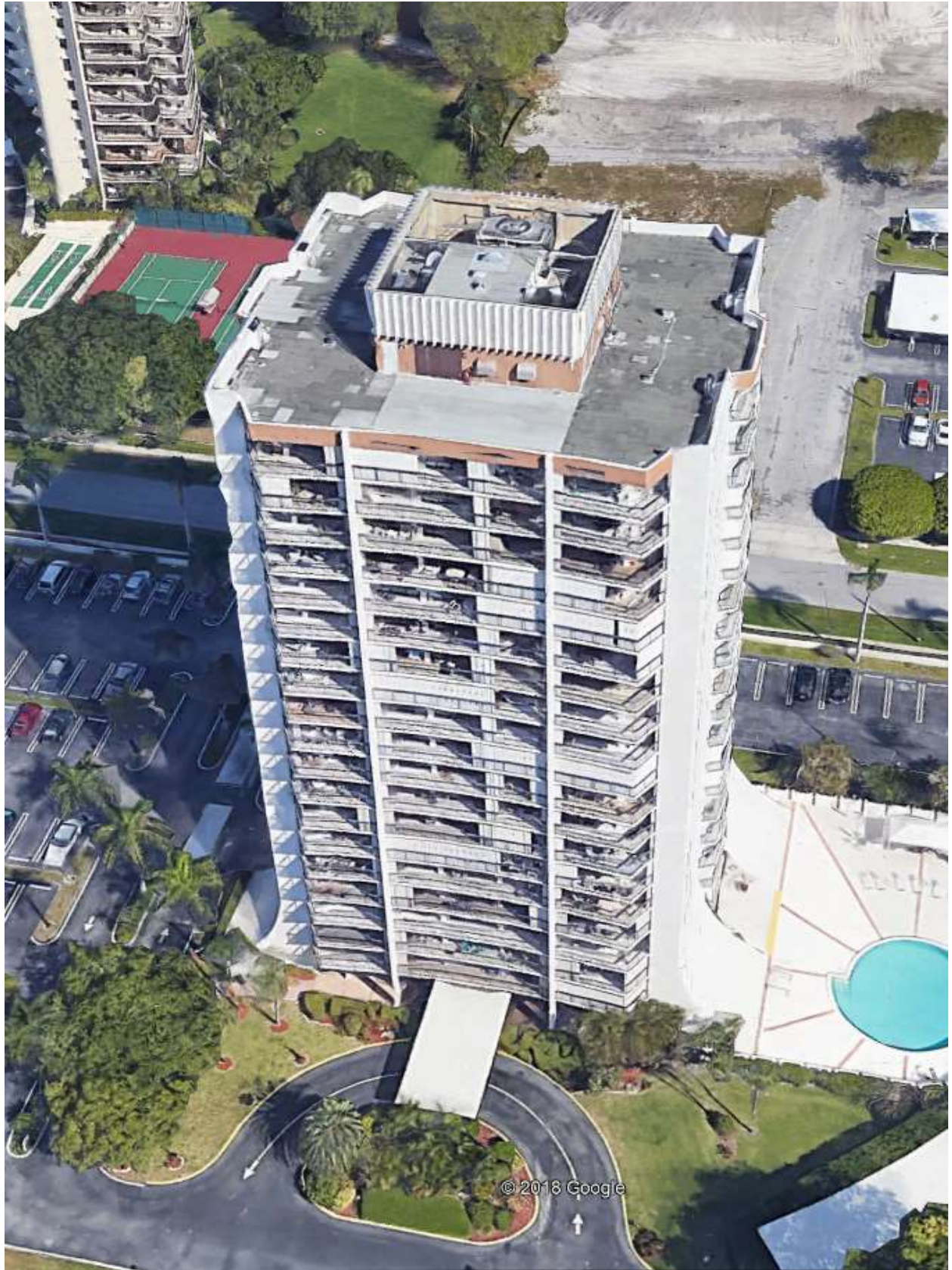
As the overlap zone does not reach any occupied areas, the applicant submits that there will be no interference to station WIRK and therefore, the applicant requests a waiver of §74.1204(a) in respect to WIRK, Indiantown, Florida.

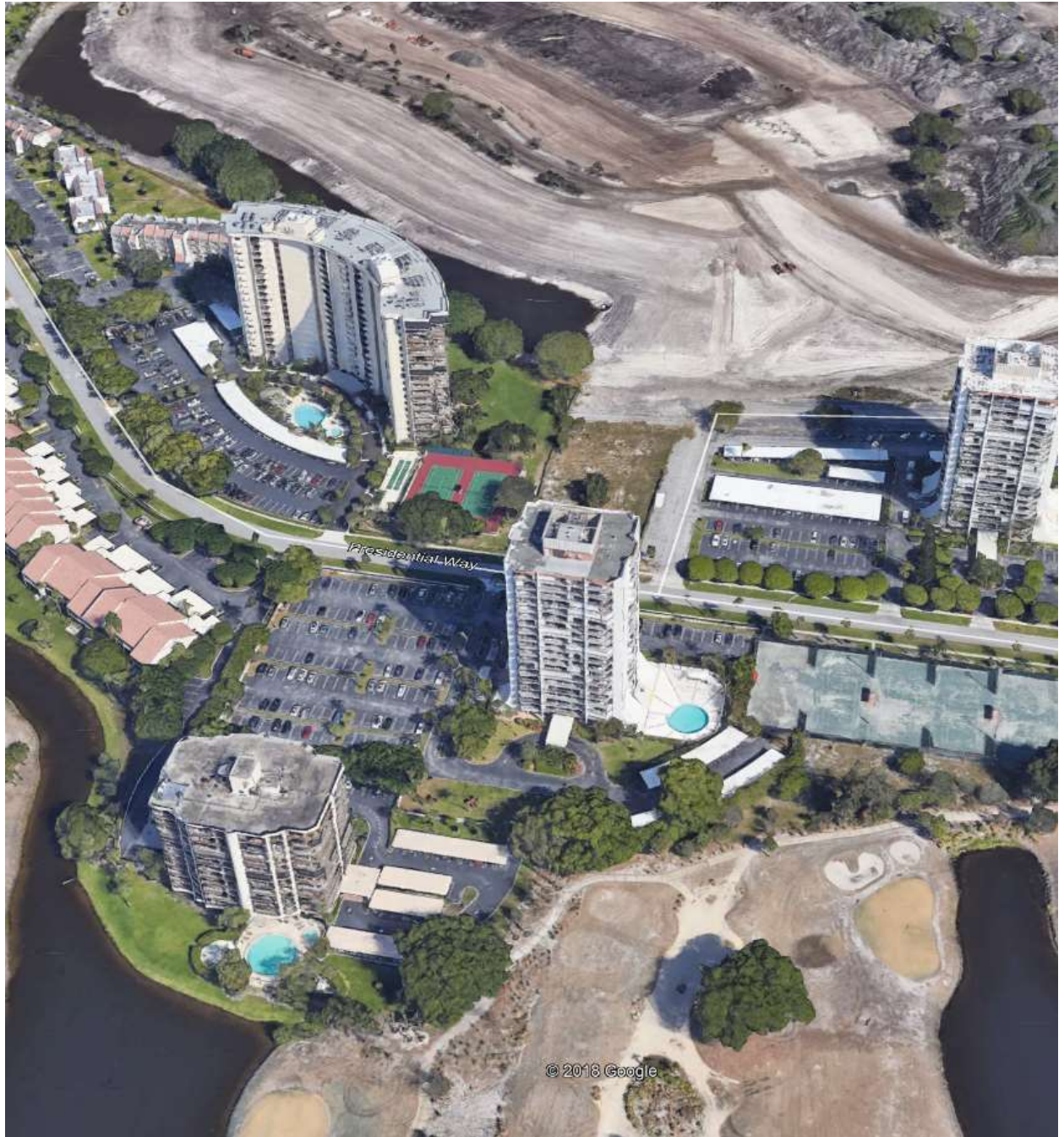
We also note that there will be a contingent application being filed for FM translator W279DU. That application will move W279DU to the same rooftop as the instant application and will specify operation on Channel 281D. This will result in a second adjacent channel relationship between W279DG will be on Channel 279D and W279DU that will be on Channel 281D. The two translators will be located approximately 14 meters apart from each other. W279DG will place a 138 dBu interfering contour at the instant site, thus creating a 168 dBu interfering contour of less than one meter. As a result, there will be no interference between the proposed facilities of W279DG and W279DU in any occupied areas.

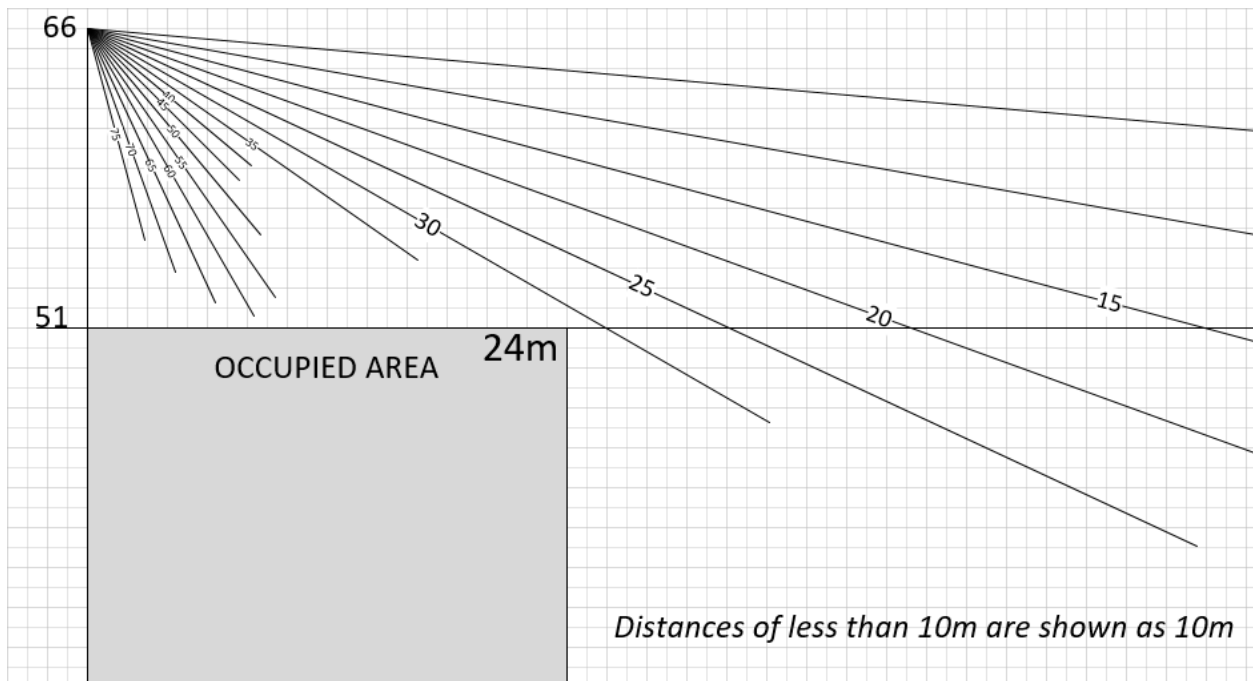
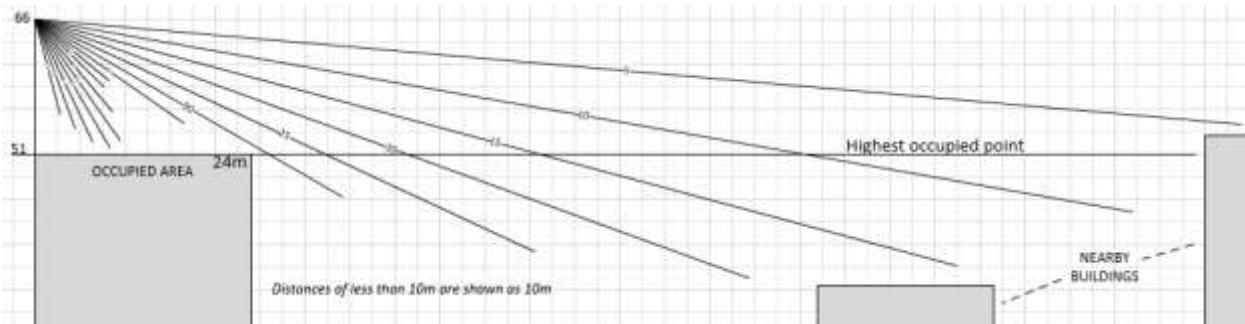
Report completed by
Michelle Bradley
Founder, REC Networks
August 24, 2018



Proposed Power:				0.25 kW				
Antenna Height AGL:				66 m				
Interference Contour:				118.1 dBu				
Artificial RX Antenna Height:				51 m				
Antenna Type:				Nicom BKG77 - 3 bay Half-wave spacing				
Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Ant to Interference Contour	Distance from Ant to Artificial Plane	Field Strength in dBu @ Artificial Plane	Distance from Ant to Ground Level	Field Strength in dBu @ Ground Level
5	0.974	0.237	-6.25	134.44	172.11	115.95	757.27	103.09
10	0.896	0.201	-6.97	123.67	86.38	121.22	380.08	108.35
15	0.766	0.147	-8.34	105.73	57.96	123.32	255.00	110.45
20	0.609	0.093	-10.33	84.06	43.86	123.75	192.97	110.88
25	0.441	0.049	-13.13	60.87	35.49	122.79	156.17	109.92
30	0.282	0.020	-17.02	38.92	30.00	120.36	132.00	107.49
35	0.142	0.005	-22.97	19.60	26.15	115.60	115.07	102.73
40	0.032	0.000	-35.92	4.42	23.34	103.64	102.68	90.77
45	0.045	0.001	-32.96	6.21	21.21	107.43	93.34	94.56
50	0.092	0.002	-26.74	12.70	19.58	114.34	86.16	101.47
55	0.113	0.003	-24.96	15.60	18.31	116.71	80.57	103.84
60	0.114	0.003	-24.88	15.74	17.32	117.27	76.21	104.40
65	0.103	0.003	-25.76	14.22	16.55	116.78	72.82	103.91
70	0.087	0.002	-27.23	12.01	15.96	115.63	70.24	102.76
75	0.069	0.001	-29.24	9.52	15.53	113.85	68.33	100.98
80	0.053	0.001	-31.54	7.32	15.23	111.73	67.02	98.86
85	0.042	0.000	-33.56	5.80	15.06	109.81	66.25	96.94
90	0.040	0.000	-33.98	5.52	15.00	109.42	66.00	96.55







The graphs above show the 118.1 dBu interfering contour along each depression angle. This graph demonstrates that the 118.1 dBu interfering contour does not reach below 51 meters at any point closer than 24 meters from the base of the antenna structure. Since there is no point on the roof from the antenna structure to the edge of the roof that exceeds 24 meters, then a showing can be made that no interference to occupied areas is possible.

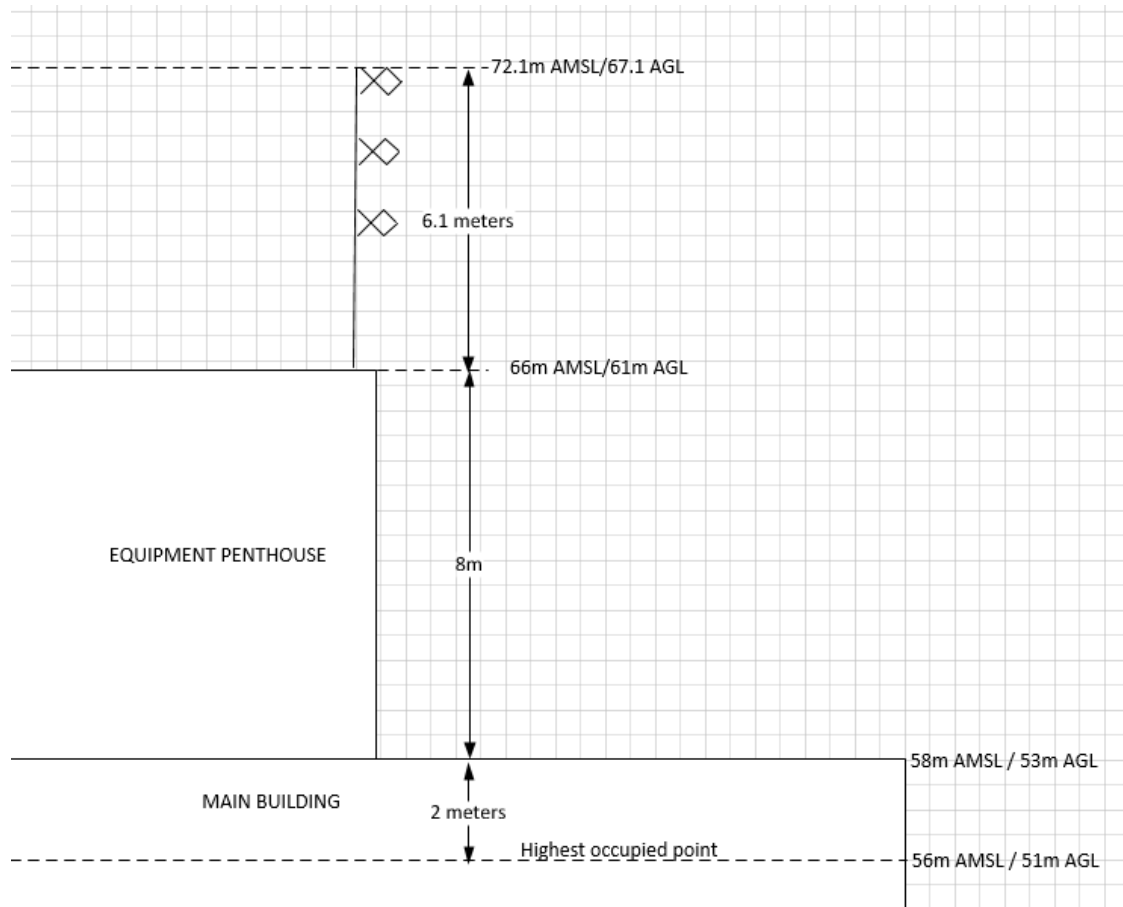
TOWER REGISTRATION – 20 FOOT RULE

W279DG
West Palm Beach, FL
Channel 279D (103.7 MHz)

The antenna structure is proposed to be placed on the roof of a multi-story structure. The highest point on the roof to the highest point of the antenna structure is 6 meters.

As the highest point of the proposed tower structure does not exceed 6 meters (20 feet) above the highest point of the supporting structure, this application is exempt from antenna structure registration in accordance with §17.7(e)(3) of the Commission's Rules.

Because the proposed tower installation reaches a point not exceeding 6 meters above the highest point of the support structure exclusive of appurtenances, the applicant is requesting processing in accordance with §17.3(e)(3) of the Commission's Rules.



Report completed by
Michelle Bradley
Founder, REC Networks
August 24, 2018

NEPA COMPLIANCE

W279DG
West Palm Beach, FL
Channel 279D (103.7 MHz)

Applicant proposes to place two FM translators on the rooftop of multi-story multiple dwelling unit structure as follows:

Call Sign	Radiation Center above highest point of occupation	Maximum ERP	Predicted Power Density ($\mu\text{W}/\text{cm}^2$)
W279DG (prop)	15 m	0.250 kW-H + 0.250 kW-V	6.789
W279DU (prop)	15 m	0.247 kW-H + 0.247 kW-V	6.706

The aggregate power density at this site is $13.4958 \mu\text{W}/\text{cm}^2$ exposure, which meets the general population/uncontrolled exposure of $200 \mu\text{W}/\text{cm}^2$ as well as the $1,000 \mu\text{W}/\text{cm}^2$ exposure for an occupational/controlled exposure environment.

We do note that based on the design of the circular polarized antennas, the actual predicted power density towards occupied areas in uncontrolled areas may be substantially lower and that the calculations above are based on a absolutely worst-case scenario.

In the event that work needs to take place on the tower, the stations may need to reduce power or temporarily discontinue operations in order to assure workplace safety.

Report completed by
Michelle Bradley
Founder, REC Networks
August 24, 2018