

Application for Modification

Post – Repack Construction Permit

Engineering Exhibit

WOPX-TV – Melbourne, FL

Facility ID: 67602

Licensee “ION MEDIA ORLANDO LICENSE, INC” is currently authorized to operate on Post-Repack DTV channel 14. The Antenna Structure Registration Number is 1038158 with a Latitude of 28° 05' 52.5" N+ and a Longitude of 081° 07' 50.7" W-.

The purpose of this application is to request authority to modify the construction permit (0000034352) to operate from Antenna Structure Registration Number 1206874 with a Latitude of 28° 16' 45.3" N+ and a Longitude of 081° 01' 24.0" W-. The HAAT is 536.6 m (AGL 532.1 m) with an AMSL of 554.8 m. An ERP of 419 kW will be utilized.

The station is filing this request to change towers because the station is moving to a new tower location. To the extent necessary, the station requests an exemption or waiver of any current freeze on the filing of construction permit modifications as needed to process and approve this application.

Antenna System

A directional side mounted antenna will be utilized. It will be affixed to an existing guyed tower structure and will not increase the overall height of the structure. Elevation and Azimuth patterns are attached.

RF Hazard (Environmental)

Human Exposure measurements were calculated using the OET- 65 equation and the outcome is compliant with FCC 1.1310. Furthermore, the calculation is under 5% of the limit categorically excluding the application from further environmental evaluations.

Calculated Maximum	Calculated Exposure	Percent of Limit
mW/cm ²	mW/cm ²	
0.315	0.001112	0.35%

The station will coordinate with other(s) to comply with access, antenna and/or tower issues related to RF Exposure

Broadcast Facility

§73.616 Interference Caused

A calculation using *TVStudy* version 2.2.5 using an LMS database dated 2018-10-16 indicates that there is no excessive new interference created. This study used cell spacing of 2 km and a profile spacing of 1 km.

§73.622 Maximum ERP and Antenna Height

The application does not exceed the maximum ERP for the specified HAAT.

Application for Modification

Post – Repack Construction Permit

Engineering Exhibit

§73.623 DTV Allotments

The application does not change the DTV Table of Allotments.

§73.625 Coverage of Principal Community

The application's ERP will sufficiently cover Melbourne, Florida. RF coverage analysis attached.

§73.1030 Radio, Research and Receiving Locations

A calculation using *TVStudy* version 2.2.5 using an LMS database dated 2018-10-16 indicates that no excessive interference to any "protected" locations. As such, no coordination or notification is required.

The same calculation shows no land mobile station failures. However the station intends to construct the facility with a more stringent mask filter to further mitigate any possible land mobiles issues.

§73.1650 International Agreements

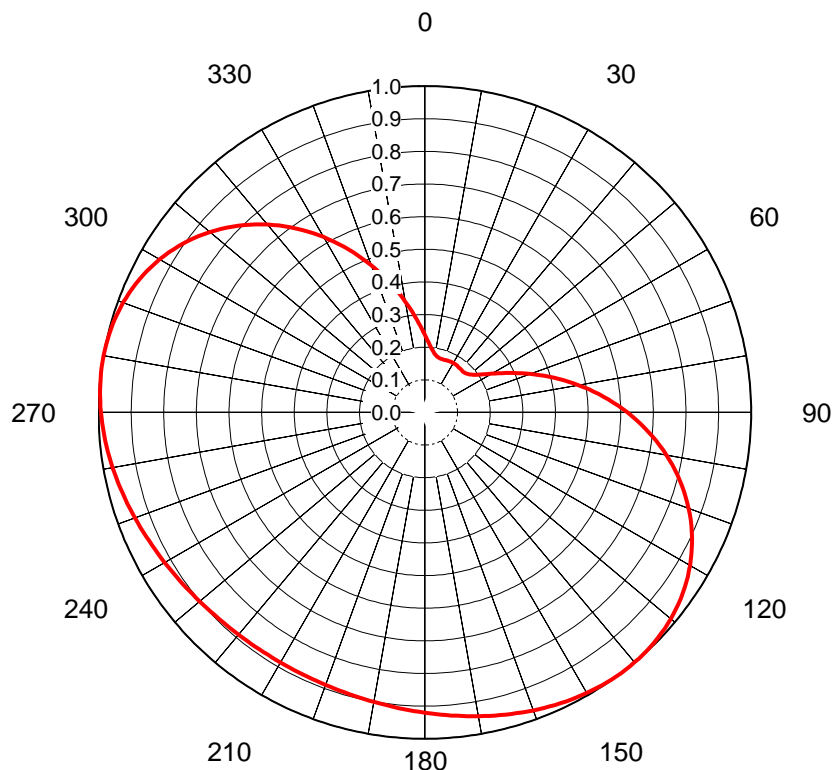
The application's transmit location is 1494.3 km from Canada. As such, no coordination or notification is required.

The application's transmit location is 1592.5 km from Mexico. As such, no coordination or notification is required.

AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70375-2**
 Date **13-Aug-18**
 Call Letters **WOPX**
 Channel **14**
 Frequency **473 MHz**
 Antenna Type **TFU-24DSC-R C170**
 Gain **1.68 (2.27dB)**
Calculated

Drawing # **TFU-C170-H-D14**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.238	36	0.173	72	0.370	108	0.841	144	0.999	180	0.920	216	0.886	252	0.951	288	0.989	324	0.701
1	0.230	37	0.173	73	0.383	109	0.851	145	0.999	181	0.918	217	0.887	253	0.953	289	0.987	325	0.688
2	0.222	38	0.172	74	0.396	110	0.860	146	0.998	182	0.916	218	0.887	254	0.956	290	0.984	326	0.675
3	0.215	39	0.172	75	0.410	111	0.869	147	0.997	183	0.914	219	0.888	255	0.959	291	0.981	327	0.662
4	0.208	40	0.172	76	0.423	112	0.878	148	0.996	184	0.912	220	0.889	256	0.961	292	0.977	328	0.648
5	0.202	41	0.172	77	0.437	113	0.887	149	0.994	185	0.910	221	0.890	257	0.964	293	0.974	329	0.634
6	0.197	42	0.171	78	0.451	114	0.895	150	0.993	186	0.908	222	0.891	258	0.967	294	0.970	330	0.621
7	0.192	43	0.172	79	0.465	115	0.903	151	0.991	187	0.906	223	0.892	259	0.969	295	0.965	331	0.607
8	0.188	44	0.172	80	0.479	116	0.911	152	0.989	188	0.904	224	0.893	260	0.972	296	0.961	332	0.593
9	0.184	45	0.173	81	0.493	117	0.918	153	0.987	189	0.902	225	0.894	261	0.974	297	0.955	333	0.579
10	0.181	46	0.173	82	0.508	118	0.925	154	0.986	190	0.901	226	0.895	262	0.977	298	0.950	334	0.564
11	0.179	47	0.175	83	0.522	119	0.932	155	0.983	191	0.899	227	0.896	263	0.979	299	0.944	335	0.550
12	0.176	48	0.176	84	0.536	120	0.938	156	0.981	192	0.898	228	0.898	264	0.981	300	0.938	336	0.536
13	0.175	49	0.179	85	0.550	121	0.944	157	0.979	193	0.896	229	0.899	265	0.983	301	0.932	337	0.522
14	0.173	50	0.181	86	0.564	122	0.950	158	0.977	194	0.895	230	0.901	266	0.986	302	0.925	338	0.508
15	0.173	51	0.184	87	0.579	123	0.955	159	0.974	195	0.894	231	0.902	267	0.987	303	0.918	339	0.493
16	0.172	52	0.188	88	0.593	124	0.961	160	0.972	196	0.893	232	0.904	268	0.989	304	0.911	340	0.479
17	0.172	53	0.192	89	0.607	125	0.965	161	0.969	197	0.892	233	0.906	269	0.991	305	0.903	341	0.465
18	0.171	54	0.197	90	0.621	126	0.970	162	0.967	198	0.891	234	0.908	270	0.993	306	0.895	342	0.451
19	0.172	55	0.202	91	0.634	127	0.974	163	0.964	199	0.890	235	0.910	271	0.994	307	0.887	343	0.437
20	0.172	56	0.208	92	0.648	128	0.977	164	0.961	200	0.889	236	0.912	272	0.996	308	0.878	344	0.423
21	0.172	57	0.215	93	0.662	129	0.981	165	0.959	201	0.888	237	0.914	273	0.997	309	0.869	345	0.410
22	0.172	58	0.222	94	0.675	130	0.984	166	0.956	202	0.887	238	0.916	274	0.998	310	0.860	346	0.396
23	0.173	59	0.230	95	0.688	131	0.987	167	0.953	203	0.887	239	0.918	275	0.999	311	0.851	347	0.383
24	0.173	60	0.238	96	0.701	132	0.989	168	0.951	204	0.886	240	0.920	276	0.999	312	0.841	348	0.370
25	0.174	61	0.247	97	0.714	133	0.991	169	0.948	205	0.886	241	0.923	277	1.000	313	0.830	349	0.357
26	0.174	62	0.256	98	0.727	134	0.994	170	0.945	206	0.885	242	0.925	278	1.000	314	0.820	350	0.344
27	0.174	63	0.266	99	0.739	135	0.995	171	0.943	207	0.885	243	0.927	279	1.000	315	0.809	351	0.332
28	0.175	64	0.275	100	0.752	136	0.997	172	0.940	208	0.885	244	0.930	280	1.000	316	0.798	352	0.320
29	0.175	65	0.286	101	0.764	137	0.998	173	0.937	209	0.885	245	0.932	281	0.999	317	0.787	353	0.309
30	0.175	66	0.297	102	0.776	138	0.999	174	0.935	210	0.885	246	0.935	282	0.999	318	0.776	354	0.297
31	0.175	67	0.309	103	0.787	139	0.999	175	0.932	211	0.885	247	0.937	283	0.998	319	0.764	355	0.286
32	0.175	68	0.320	104	0.798	140	1.000	176	0.930	212	0.885	248	0.940	284	0.997	320	0.752	356	0.275
33	0.174	69	0.332	105	0.809	141	1.000	177	0.927	213	0.885	249	0.943	285	0.995	321	0.739	357	0.266
34	0.174	70	0.344	106	0.820	142	1.000	178	0.925	214	0.885	250	0.945	286	0.994	322	0.727	358	0.256
35	0.174	71	0.357	107	0.830	143	1.000	179	0.923	215	0.886	251	0.948	287	0.991	323	0.714	359	0.247

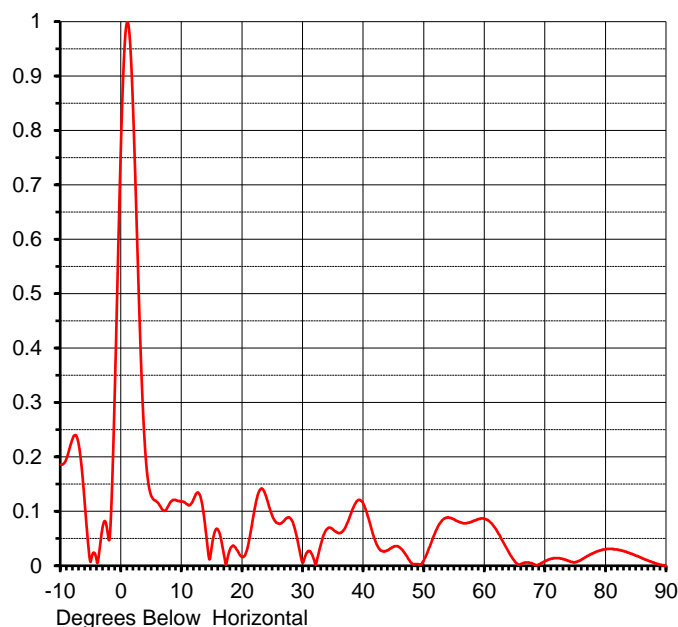
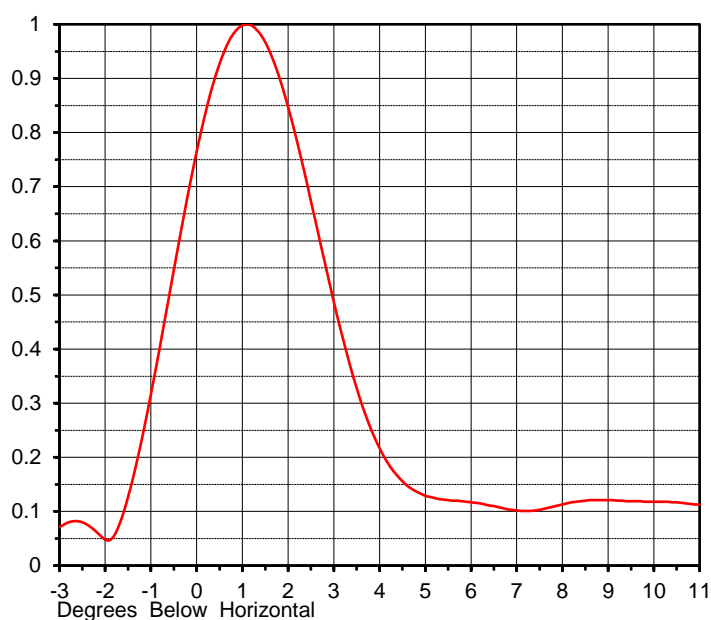
This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

ELEVATION PATTERN

Proposal No. **C-70375-2**
 Date **13-Aug-18**
 Call Letters **WOPX**
 Channel **14**
 Frequency **473 MHz**
 Antenna Type **TFU-24DSC-R C170**

RMS Directivity at Main Lobe **19.0 (12.79 dB)**
 RMS Directivity at Horizontal **11.1 (10.45 dB)**
Calculated

Beam Tilt **1.00 deg**
 Drawing Number **24Q190100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.186	10.0	0.118	30.0	0.006	50.0	0.012	70.0	0.009
-9.0	0.199	11.0	0.112	31.0	0.027	51.0	0.038	71.0	0.013
-8.0	0.235	12.0	0.124	32.0	0.003	52.0	0.066	72.0	0.014
-7.0	0.220	13.0	0.129	33.0	0.042	53.0	0.084	73.0	0.012
-6.0	0.108	14.0	0.057	34.0	0.068	54.0	0.089	74.0	0.008
-5.0	0.011	15.0	0.041	35.0	0.066	55.0	0.085	75.0	0.007
-4.0	0.005	16.0	0.065	36.0	0.060	56.0	0.080	76.0	0.012
-3.0	0.076	17.0	0.016	37.0	0.071	57.0	0.078	77.0	0.018
-2.0	0.047	18.0	0.032	38.0	0.099	58.0	0.082	78.0	0.024
-1.0	0.361	19.0	0.030	39.0	0.120	59.0	0.086	79.0	0.028
0.0	0.803	20.0	0.016	40.0	0.112	60.0	0.086	80.0	0.030
1.0	1.000	21.0	0.042	41.0	0.079	61.0	0.079	81.0	0.031
2.0	0.816	22.0	0.105	42.0	0.043	62.0	0.064	82.0	0.029
3.0	0.452	23.0	0.141	43.0	0.027	63.0	0.044	83.0	0.027
4.0	0.201	24.0	0.123	44.0	0.029	64.0	0.024	84.0	0.023
5.0	0.127	25.0	0.089	45.0	0.035	65.0	0.007	85.0	0.018
6.0	0.116	26.0	0.077	46.0	0.033	66.0	0.003	86.0	0.014
7.0	0.101	27.0	0.085	47.0	0.019	67.0	0.006	87.0	0.009
8.0	0.115	28.0	0.086	48.0	0.004	68.0	0.003	88.0	0.005
9.0	0.121	29.0	0.051	49.0	0.003	69.0	0.003	89.0	0.002
								90.0	0.000

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided.
 No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

WOPX -App

Latitude: 28-16-45.30 N

Longitude: 081-01-24 W

ERP: 419.00 kW

Channel: 14

Frequency: 473.0 MHz

AGL: 532.1 m

HAAT: 536.6 m




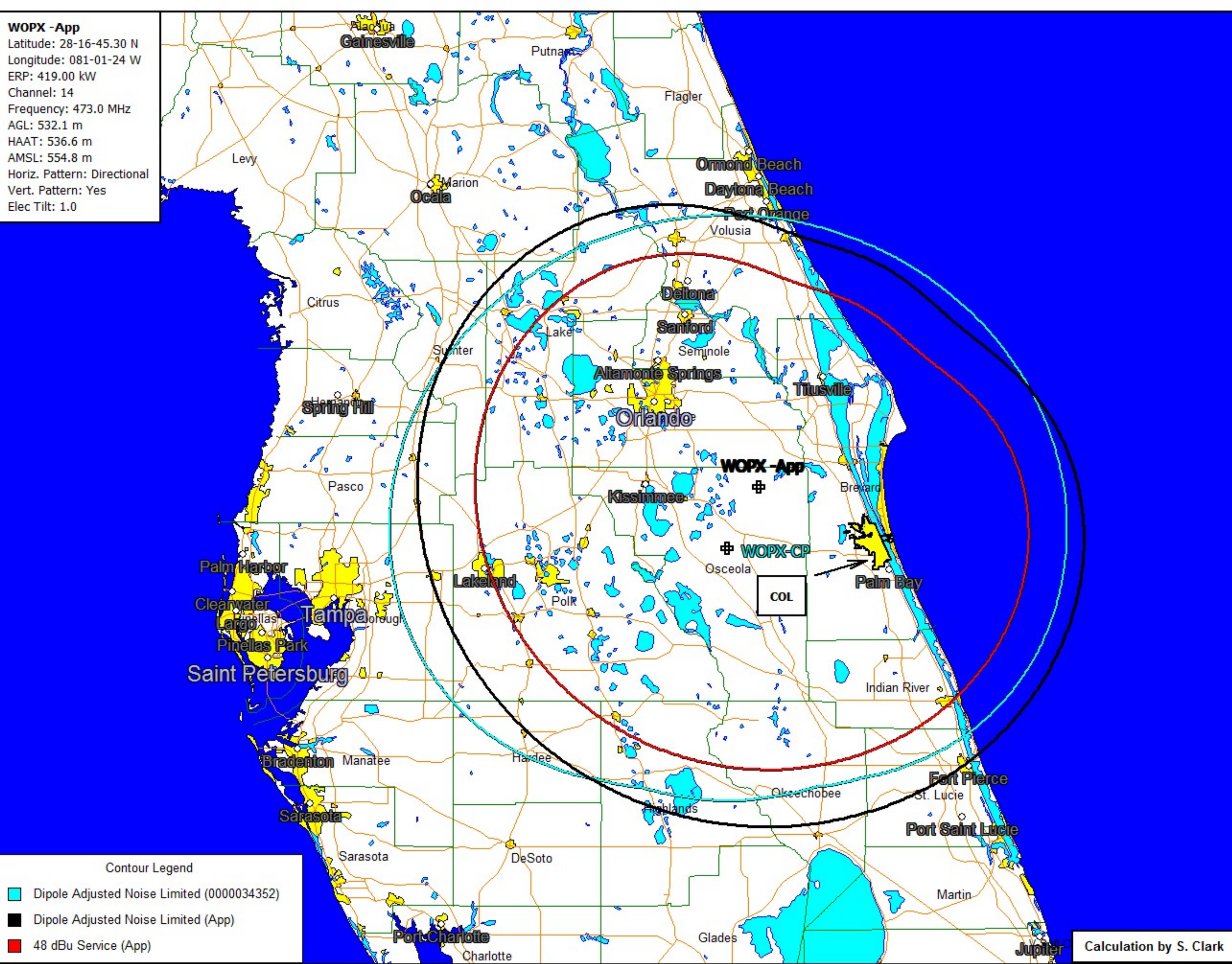
AMSL: 554.8 m

Horiz. Pattern: Directional

Vert. Pattern: Yes

Elec Tilt: 1.0

Contour Legend

 Dipole Adjusted Noise Limited (0000034352) Dipole Adjusted Noise Limited (App) 48 dBu Service (App)

Calculation by S. Clark